clc 96000438
(cont.)

X Collection

INDEX

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 LIBRARY OF CONGRESS 0 029 767 340 3	1877A-1	119	T59.S7 no. 1-119 (1951-54) no. 32 in oversize box
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* SEE NEXT BINDER	1877C(1)	138	T59.S7 no. 1-138
	1877C(2)	69	T59.S7 no. 139-207

A.S. No. CC. 1, Part I—1950

SAA
Wiring Rules

Part I. Wiring Methods

PUBLISHED BY
STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter, 1950

PRICE 7/6 POST FREE

SUPPLEMENT No. 2

to

SAA Code For

Compressed Gas Cylinders

(No. CB. 4 - 1950)

IDENTIFICATION OF MEDICAL GAS CYLINDERS

STANDARDS ASSOCIATION OF AUSTRALIA
(Incorporated by Royal Charter)

Price 2/-

AUSTRALIAN STANDARD No. A.79—1955

GLOSSARY OF NAMES FOR EARTHMOVING AND CONSTRUCTIONAL PLANT

Incorporated by Royal Charter

STANDARDS ASSOCIATION OF AUSTRALIA

AUSTRALIAN STANDARD No. B.130—1955

CLASSIFICATION OF COVERED ELECTRODES

PUBLISHED BY
STANDARDS ASSOCIATION OF AUSTRALIA
incorporated by Royal Charter

Price 3/-

A.S. No. T 6—1956

Australian Standard Specification

for

Dental Modelling Compound

The Standards Committee of the Australian Dental Association has adopted this specification for use in connection with its scheme for accreditation of certified dental materials, lists of which are published periodically in the dental journals throughout Australia. Enquiries regarding this scheme should be addressed direct to the Australian Dental Association.

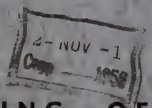
When used in connection with the scheme the specification is known as Australian Dental Standard No. T. 6 (A.D.S. No. T. 6)

PUBLISHED BY

STANDARDS ASSOCIATION OF AUSTRALIA

PRICE 3/-

AUSTRALIAN STANDARD No. CZ.9—1956

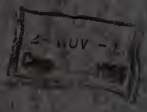


MINIMISING OF ANAESTHETIC FIRE & EXPLOSION HAZARDS IN HOSPITALS

Incorporated by Royal Charter

STANDARDS ASSOCIATION OF AUSTRALIA

AUSTRALIAN STANDARD No. O.60—1956



WOOD TREATED WITH LYCTICIDES

Incorporated by Royal Charter

STANDARDS ASSOCIATION OF AUSTRALIA

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

AMENDMENT No. 5
to
SAA LIFT CODE
(A.S. No. CA. 3—1947)

Revised	April	1947
Amended and Redated	January	1950
Amended and Redated	November	1951
Amended and Redated	October	1952
Amended and Redated	December	1953
Amendment No. 5	April	1956

The SAA Lift Code (A.S. No. CA. 3—1947), previously amended and redated as stated above, is now further amended; the amendments should be inserted at the appropriate places.

Pages 16 and 48. Rules 3-28 and 4-17, Means of Access.

Insert the word "Permanent" at the beginning of the first paragraph.

AMDT. No. 5
APRIL 1956

Sub-rule (b)

Delete existing sub-rules (b) and substitute the following:

(b) **Stairs.** Where the machine room entrance is 5 ft or more above or below the adjacent floor or roof surface, access shall be provided by means of stairs in accordance with the following requirements.

(i) The angle of inclination of the stair shall not exceed 50° from the horizontal and the stair shall be not less than 2 ft clear width.

(ii) The tread shall have a non-slip surface which shall be not less than 5½ in. wide for open stair construction and not less than 8 inches wide for closed stair construction.

(iii) The rise of the stair shall not exceed 10 in.

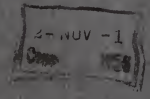
(iv) A substantial handrail shall be provided on the outer stringer of all stairways, fixed at a convenient height, but not less than 18 inches high, measured vertically from the

AUSTRALIAN STANDARD No. A.10—1956

RESIDUAL BITUMEN AND FLUXED NATIVE ASPHALT FOR ROADMAKING PURPOSES

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AUSTRALIAN STANDARD No. B.116—1956



DOMESTIC REFRIGERATORS
(Automatic Compression Type)

Incorporated by Royal Charter

STANDARDS ASSOCIATION OF AUSTRALIA

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

AMENDMENT No. 1

to

Australian Standard Specification

for

DENTAL MERCURY

(No. T.1—1949)

AMDT. No. 1
SEPT. 1956

Amend Clause 5 to read:

The mercury shall be packed in non-metallic containers of sufficient strength to hold the contents under normal conditions of transport and handling. The material(s) from which the containers and their closures are made shall have no deleterious effects on mercury.

September 1956.

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

Australian Standard Specification No. B.125—1956
CAST IRON SMOOTH TUBE ECONOMISERS

British Standard No. 1713:1951, Cast Iron Smooth Tube Economisers, has been endorsed with amendment as Australian Standard No. B.125-1956.

To avoid reprinting B.S.1713 as an Australian standard, endorsement and amendment slips have been issued. The endorsement slip should be attached to the cover of B.S.1713 for use in Australia and the amendments inserted at the appropriate pages.

Page 11. Clause 20. Isolating Valve.

Delete existing clause and *substitute* the following:

Isolation of Economisers. Provision shall be made to isolate the economiser from its associated equipment by means of suitable valves.

Page 12. Clause 29. Economiser Setting.

Delete existing clause.

Page 13. Clause 30. Economiser Water Outlet Temperature.

Delete paragraph one and *substitute* the following:

The design conditions should be such that the difference between the economiser outlet water temperature and the saturated steam temperature of the boiler should be not closer than 70 Fahrenheit degrees unless the outlet water temperature of the economiser can be accurately assessed, in which case the temperature difference shall be not closer than 40 Fahrenheit degrees.

Page 13. Clause 33. Hydraulic Tests.
(c) Completed Economisers.

Delete this sub-clause and *substitute* the following:

Each completed economiser shall undergo an hydraulic test at a pressure equivalent to 1.25 times the design pressure plus 100 lb./sq. in., and the minimum test pressure shall be not less than 240 lb./sq. in., for the purpose of proving the joints made during erection. The test pressure shall be maintained for a period of at least 30 minutes.

September 1956.

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

Australian Standard Specification No. B.124—1956
CAST IRON ECONOMISERS WITH EXTENDED SURFACE HORIZONTAL TUBES

British Standard No. 1712:1951, Cast Iron Economisers with Extended Surface Horizontal Tubes, has been endorsed with amendment as Australian Standard No. B.124—1956.

To avoid reprinting B.S.1712 as an Australian standard, endorsement and amendment slips have been issued. The endorsement slip should be attached to the cover of B.S.1712 for use in Australia and the amendments inserted at the appropriate pages.

Page 10. Clause 20. Isolating Valve.

Delete existing clause and *substitute* the following:

Isolation of Economisers. Provision shall be made to isolate the economiser from its associated equipment by means of suitable valves.

Page 11. Clause 29. Economiser Setting.

Delete existing clause.

Page 11. Clause 30. Economiser Water Outlet Temperature.

Delete paragraph one and *substitute* the following:

The design conditions shall be such that the difference between the economiser outlet water temperature and the saturated steam temperature of the boiler should be not closer than 70 Fahrenheit degrees unless the outlet water temperature of the economiser can be accurately assessed, in which case the temperature difference shall be not closer than 40 Fahrenheit degrees.

Page 11. Clause 33. Hydraulic Tests.
(b) Completed Economisers.

Delete this sub-clause and *substitute* the following:

Each completed economiser shall undergo an hydraulic test at a pressure equivalent to 1.25 times the design pressure plus 100 lb./sq. in., and the minimum test pressure shall not be not less than 240 lb./sq. in., for the purpose of proving the joints made during erection. The test pressure shall be maintained for a period of at least 30 minutes.

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

AMENDMENT No. 2
to
Australian Standard Specification
for
TERRA COTTA ROOFING TILES
(A.S. No. A.13—1950)

First Published 1950
Amended and Redated . . . . June 1955
Amended . . . . . September 1956

The above specification is amended as set out hereunder: (the amendments should be inserted at the appropriate places in the Specification).

Page 5. Clause 1-5. Test Specimens. AMDT. No. 2 SEPT. 1956

Delete sub-clause (a) Selection, and substitute the following:

(a) **Selection.** Tiles for testing shall be selected at random by the purchaser or his representative in the presence of the vendor or his representative. The specimens shall be taken after delivery while the tiles are still on the ground, and shall be representative of the whole consignment of tiles from which they are selected.

Page 8. Clause 3-7. Physical Properties. AMDT. No. 2 SEPT. 1956

Delete sub-clause (a) Transverse Strength, and substitute the following:

(a) **Transverse Strength.** The average transverse breaking strength of 6 tiles selected in accordance with Clause 1-5, Test Specimens, and tested in accordance with Appendix A after immersion in water at room

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

Australian Standard Specification No. K.1 Part 8—1956

THE DETERMINATION OF MANGANESE IN IRON AND STEEL (ABSORPTIOMETRIC METHOD)

British Standard 1121 Part 23:1951 Manganese in Iron and Steel (Absorptiometric Method), has been endorsed with amendment as Australian Standard No. K.1, Part 8—1956.

To avoid reprinting B.S. 1121 Part 23:1951 the attached endorsement and amendment slips have been issued.

The endorsement slip should be attached to the cover of B.S. 1121 Part 23 for use in Australia, and the amendment inserted at the appropriate page.

Page 5. SECTION FIVE: PROCEDURE.

Paragraph 2. Line 3.

Delete "5 minutes" and insert:

"2 minutes after the appearance of the pink colour."

March, 1956.

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

Australian Standard Specification No. B. 65-1955

FERROUS PIPES AND PIPING INSTALLATIONS

for and in connection with Land Boilers

The 1942 edition of B.S. 806 was endorsed as A.S. No. B. 65-1943. The 1954 edition of B.S. 806 has been examined by the Association's Boiler and Unfired Pressure Vessels Sectional Committee which has decided that this new edition be endorsed with some minor amendment.

To avoid reprinting B.S. 806 as an Australian Standard, endorsement and amendment slips have been issued. The endorsement slip should be attached to the cover of B.S. 806 for use in Australia and the amendments inserted at the appropriate pages.

GENERAL: To avoid confusion with A.S. No. B. 105 Steel Tubes and Tubulars, which refers to "Classes" of pipes, the word "Types" is to be used in place of "Classes" throughout this endorsement of B.S. 806. Wherever it occurs in the specification, then, the word "Class" is therefore replaced by "Type".

This alteration affects the headings of the material specifications and Clauses 2, 6, 9, 23 and 24, Table I, Appendix E and Appendix G (materials for examples, 1, 2 and 3).

Page 10. CLAUSE 4. INFORMATION TO BE SUPPLIED BY THE PURCHASER. Delete paragraphs (e), (f), with the remainder of the clause, and substitute the following:

(e) Whether the supplementary requirements of type B pipes in Clause 23 a (iii) apply.

If the purchaser omits to give the information required for items (b), (c), (d), or (e) the manufacturer shall be entitled to act as if these items have been answered negatively.

March 1956

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

Amendment No. 1
to
Supplement No. 1
to

SAA CODE FOR COMPRESSED GAS CYLINDERS

(No. CB. 4—1950)

The above supplement has been amended as below: the amendments should be cut out and inserted at the appropriate places in the text.

Clause 1—Scope.

Add the following:

HELIUM ..... Fig. 8
CARBON DIOXIDE..... Fig. 9

Fig. 8.

Alter title to read:

OUTLET CONNECTION FOR HELIUM and HELIUM-OXYGEN MIXTURES (Oxygen less than 20 per cent).

Fig. 9.

Alter title to read:

OUTLET CONNECTION FOR CARBON DIOXIDE, and CARBON DIOXIDE-OXYGEN MIXTURES (Carbon Dioxide over 7 per cent).

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

#18

Australian Standard No. K. 1, Part 6-1956

METHODS FOR THE DETERMINATION OF TIN IN IRON AND STEEL

X-T59

.S7

British Standard 1121 : Part 20 : 1951, Tin in Highly Alloyed Steels (including high speed steels), together with PD2135, Amendment No. 1 published 15 March 1955, has been endorsed with amendment as Australian Standard No. K. 1, Part 6-1956.

To avoid reprinting B.S. 1121 : Part 20 : 1951 and PD2135, the attached endorsement and amendment slips have been issued.

The endorsement slip should be attached to the cover of B.S. 1121, Part 20 for use in Australia and the amendments inserted at the appropriate pages.

Page 7. Section Five : Procedure
Paragraph 6, line 11
Insert " (Note 5) " after the word " dioxide ".

Page 7. Section Seven : Notes
Add the following :
" 5. Alternative methods of proved reliability for producing carbon dioxide are permitted."

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

AMENDMENT No. 1

to

A.S. No. A. 16-1938, Australian Standard Glossary of Terms Used in Road Engineering

In view of the publication of A.S. No. A. 79, Glossary of Names for Earthmoving and Constructional Plant, Section 7-Plant, Machinery, (pages 28-30) of A.S. No. A. 16 is withdrawn.

AMDT. No. 1 MARCH 1956

Australian Standard Specification No. R. 8-1956
DENSITY HYDROMETERS AND SPECIFIC GRAVITY HYDROMETERS

British Standard 718 : 1953 Density Hydrometers and Specific Gravity Hydrometers has been endorsed as Australian Standard No. R. 8-1956.

To avoid reprinting B.S. 718 : 1953 as an Australian Standard, the attached endorsement and amendment slips have been issued.

The endorsement slip should be attached to the cover of B.S. 718 for use in Australia and the amendments inserted at the appropriate pages.

No. R. 8-1956

Page 12.

Clause 11. Inscriptions.

Sub-clause (f). *Delete* "British Standard" and *insert* "Australian Standard". *Delete* "B.S. 718" and *insert* "A.S. No. R. 8".

Delete footnote.

No. R. 8-1956

Page 13.

Appendix A.

Add the following:

"In Australia facilities for testing of volumetric glassware for conformity with specifications are offered by the National Standards Laboratory and laboratories registered for this purpose by the National Association of Testing Authorities, Australia."

March 1956

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

Australian Standard Specification
No. B. 123—1955
PRESSURE PAINT CONTAINERS

British Standard No. 1101 : 1943, Pressure Paint Containers, has been endorsed with amendment as Australian Standard No. B. 123—1955.

To avoid reprinting B.S. 1101 as an Australian standard, endorsement and amendment slips have been issued. The endorsement slip should be attached to the cover of B.S. 1101 for use in Australia and the amendments inserted at the appropriate pages.

Page 7, Clause 14. Certificates of Material.

Delete existing clause and substitute the following :

Where the steel manufacturer has tested the plates he shall supply certificates of test stating the reference number of each plate, the ultimate tensile strength, the elongation and the percentage of sulphur and phosphorus in each cast. Where the steel manufacturer has not tested the plates, they shall be tested in accordance with Clauses 8 to 12 inclusive.

Page 10, Clause 27. Types of Welded Joints. (b) **Circumferential Seams.**

Delete reference to Fig. 7 and delete Fig. 7 from page 11.

Page 14, Clause 33. Heat Treatment of Containers.

Delete existing clause.

Page 20, Clause 47. Bend Test on a Butt Welded Specimen.

Delete existing clause and substitute the following :

Approval of Welders. Welders shall successfully pass the tests specified in A.S. No. CB. 14, Boiler Welding Certification Code, Part I, Arc Welding of Mild Steel, and be approved by one of the Examining Authorities specified therein.

Page 22, Appendix B. Bend test for Weakness at Junctions and Soundness of Weld Metal.

Delete existing Appendix.

March 1956

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

Australian Standard Specification
No. 10, Part 4, Section 1—1955
CLINICAL MAXIMUM THERMOMETERS

British Standard 691—1953 Clinical Maximum Thermometers has been endorsed with amendments as Australian Standard No. 10, Part 4, Section 1—1955.

To avoid reprinting B.S. 691 the attached endorsement and amendment slips have been issued.

The endorsement slip should be attached to the cover of B.S. 691 for use in Australia and the amendments inserted at the appropriate pages.

Clause 4. Bulb.

After "National Physical Laboratory" *insert* "England."

After "(Appendix A)" *insert* "or from a glass of an equivalent quality approved by a testing authority of the country of origin which possesses a standing in its own country equal to that of the National Standards Laboratory in England."

Footnote to Clause 7. Graduation and Figuring.

After "United Kingdom" *insert* "and in Australia and its Territories."

Clause 11. Inscriptions.

Amend "*d*" to read—"On thermometers of British origin, the number of this British Standard, i.e. 'B.S. 691', *"

Insert **a new Clause 12.**

12. Certificates. Except when tested and marked as a British Standard Thermometer, each thermometer shall be packed with a dated individual certificate of test, which shall give the manufacturer's name and the identification number of the thermometer required under Clause 11 of B.S. 691, and in which a recognised testing authority shall certify that the thermometer has been tested by that authority with tests similar to those applied by the National Physical Laboratory for British Standard Thermometers and has been found to comply with those tests and with this specification. The certificate shall be signed by the testing authority and the standing of the testing authority shall be as indicated in Clauses 3 and 4 of B.S. 691 amended as Australian Standard No. 10, Part 4, Section 1.

Insert **new Clause 13.**

13. Cases. When cases are required by the Purchaser, they shall be of nickel plated metal or other approved impervious material, and of strong construction and neat finish, and they shall each be of suitable length to accommodate a thermometer protected by cushioning material. Cases shall each have two raised shoulders to prevent rolling on a horizontal surface.

March 1956

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

Australian Standard Specification
No. B. 122—1955

SMALL FUSION WELDED AIR RECEIVERS

British Standard No. 1099 : 1943, Small Fusion Welded Air Receivers, has been endorsed with amendment as Australian Standard No. B. 122—1955.

To avoid reprinting B.S. 1099 as an Australian standard, endorsement and amendment slips have been issued. The endorsement slip should be attached to the cover of B.S. 1099 for use in Australia and the amendments inserted at the appropriate pages.

Page 7, Clause 14. Certificates of Material.

Delete existing clause and substitute the following :

Where the steel manufacturer has tested the plates he shall supply certificates of test stating the reference number of each plate, the ultimate tensile strength, the elongation and the percentage of sulphur and phosphorus in each cast. Where the steel manufacturer has not tested the plates, they shall be tested in accordance with Clauses 8 to 12 inclusive.

Page 10, Fig. 6.

Delete existing figure.

Page 14, Clause 35. Heat Treatment of Receivers.

Delete existing clause.

Page 17, Clause 40. Bend Test on a Butt Welded Specimen.

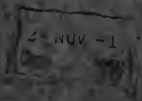
Delete existing clause and substitute the following :

Approval of Welders. Welders shall successfully pass the tests specified in A.S. No. CB. 14, Boiler Welding Certification Code, Part I, Arc Welding of Mild Steel, and be approved by one of the Examining Authorities specified therein.

Page 20, Appendix B. Bend Test for Weakness at Junctions and Soundness of Weld Metal.

Delete existing Appendix.

AUSTRALIAN STANDARD No. S.1—1956



HOUSEHOLD FURNITURE

(Minimum Requirements)

Incorporated by Royal Charter

STANDARDS ASSOCIATION OF AUSTRALIA

A.S. No. T 12—1956

Australian Standard Specification

for

DENTAL INLAY CASTING GOLDS

The Standards Committee of the Australian Dental Association has adopted this specification for use in connection with its scheme for accreditation of certified dental materials, lists of which are published periodically in the dental journals throughout Australia. Enquiries regarding this scheme should be addressed direct to the Australian Dental Association. When used in connection with the scheme the specification is known as Australian Dental Standard No. T. 12 (A.D.S. No. T. 12)

PUBLISHED BY

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

Price 3/-

A.S. No. T 14—1956

Australian Standard Specification

for

DENTAL INLAY CASTING WAX

The Standards Committee of the Australian Dental Association has adopted this specification for use in connection with its scheme for accreditation of certified dental materials, lists of which are published periodically in the dental journals throughout Australia. Enquiries regarding this scheme should be addressed direct to the Australian Dental Association. When used in connection with the scheme the specification is known as Australian Dental Standard No. T.14 (A.D.S. No. T.14).

PUBLISHED BY

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

Price 3/-

A.S. No. T. 9—1956

Australian Standard Specification for Wrought Golds for Dental Purposes

The Standards Committee of the Australian Dental Association has adopted this specification for use in connection with its scheme for accreditation of certified dental materials, lists of which are published periodically in the dental journals throughout Australia. Enquiries regarding this scheme should be addressed direct to the Australian Dental Association. When used in connection with the scheme the specification is known as Australian Dental Standard No. T9 (A.D.S. No. T.9)

PUBLISHED BY

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

Price 3/-

A.S. No. T. 10—1956

Australian Standard Specification for Dental Sticky Wax

The Standards Committee of the Australian Dental Association has adopted this specification for use in connection with its scheme for accreditation of certified dental materials, lists of which are published periodically in the dental journals throughout Australia. Enquiries regarding this scheme should be addressed direct to the Australian Dental Association. When used in connection with the scheme the specification is known as Australian Dental Standard No. T. 10 (A.D.S. No. T. 10)

PUBLISHED BY

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

Price 3/-

AUSTRALIAN STANDARD No. K.96—1956

DEFINITIONS OF TERMS RELATING TO VITREOUS ENAMEL FINISHES

incorporated by Royal Charter

STANDARDS ASSOCIATION OF AUSTRALIA

AUSTRALIAN STANDARD No. A.85—1956

CUTTING EDGES FOR DOZERS AND SCRAPERS

Incorporated by Royal Charter STANDARDS ASSOCIATION OF AUSTRALIA

AUSTRALIAN STANDARDS Nos. CZ.7—1956 & Z.7—1956

INDUSTRIAL EYE PROTECTION

AND

PERSONAL EYE PROTECTORS

Incorporated by Royal Charter

STANDARDS ASSOCIATION OF AUSTRALIA

A.S. No. U. 27—June 1956

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AUSTRALIAN STANDARD SPECIFICATION FOR AIRCRAFT MATERIALS

3 PER CENT NICKEL CASE-HARDENING STEEL[1]

A. Bars and billets for forging.

B. Black or bright bars for machining.

C. Forgings.

E. Finished case-hardened parts.

1. CHEMICAL COMPOSITION.[2] The steel shall contain :

Carbon	.. ..	not less than 0·10 nor more than 0·15 per cent.
Silicon	.. ..	not less than 0·10 nor more than 0·35 per cent.
Manganese	..	not less than 0·3 nor more than 0·6 per cent.
Nickel	.. ..	not less than 2·7 nor more than 3·5 per cent.
Chromium (residual)		not more than 0·30 per cent.
Sulphur	.. ..	not more than 0·050 per cent.
Phosphorus	..	not more than 0·050 per cent.

2. PROCESS OF MANUFACTURE. The material shall be manufactured by the open hearth or the electric process.

3. SURFACE DRESSING. The material shall be surface dressed in accordance with the requirements of Clause 1–5 (*d*) (i) (A) of A.S. No. U.10.

4. CONDITION.

(*a*) Bars and billets for forging shall be supplied as rolled or forged.

(*b*) Black bars for machining shall be supplied as rolled.

(*c*) Bright bars for machining shall be supplied rolled and bright finished.

(*d*) Forgings shall be supplied softened.

(*e*) Finished case-hardened parts shall be supplied carburised, refined and hardened.

[1] This specification is based on British Standard 4S. 15 and replaces Australian Emergency Standard (E)D. 504—1940.

[2] This composition is the same as that specified in En. 33, B.S. 970.

A.S. No. U.30—June 1956

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AUSTRALIAN STANDARD SPECIFICATION FOR AIRCRAFT MATERIAL

60 TON, 3 PER CENT CHROMIUM-MOLYBDENUM STEEL[1]

(Suitable for Nitrogen Hardening)

(LIMITING RULING SECTION 6 IN.)

A. Bars and billets for forging.
B. Black or bright bars for machining.
C. Forgings other than those for crank and propeller shafts.
D. Forgings for crank and propeller shafts.
F. Nitrogen-hardened parts.

1. **CHEMICAL COMPOSITION.** The steel shall contain:

Carbon	not less than 0·20 nor more than 0·28 per cent.
Silicon	not less than 0·10 nor more than 0·35 per cent.
Manganese	not less than 0·4 nor more than 0·65 per cent.
Nickel (residual) ..	not more than 0·30 per cent.
Chromium	not less than 2·9 nor more than 3·5 per cent.
Molybdenum.. ..	not less than 0·4 nor more than 0·7 per cent.
Sulphur	not more than 0·045 per cent.
Phosphorus	not more than 0·045 per cent.

2. **PROCESS OF MANUFACTURE.** The material shall be manufactured by the electric process.

3. **SURFACE DRESSING.** The material shall be surface dressed in accordance with the requirements of Clause 1–5 (*d*) (i) (B) of A.S. No. U.10.

4. **CONDITION.**

(*a*) Bars and billets for forging shall be supplied softened.

(*b*) Black or bright bars for machining larger than the limiting ruling section shall be supplied softened.

(*c*) Black or bright bars for machining up to and including the limiting ruling section shall be supplied hardened and tempered.

(*d*) Forgings shall be supplied hardened and tempered.

[1] This specification is based on British Standard S. 106.

A.S. No. U. 29—June 1956

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AUSTRALIAN STANDARD SPECIFICATION FOR AIRCRAFT MATERIALS

4¼ PER CENT NICKEL-CHROMIUM-MOLYBDENUM CASE-HARDENING STEEL[1]

A. Bars and billets for forging.

B. Black or bright bars for machining.

C. Forgings.

E. Finished case-hardened parts.

1. CHEMICAL COMPOSITION. The steel shall contain :

Carbon	not less than 0·12	nor more than 0·18	per cent.
Silicon	not less than 0·10	nor more than 0·35	per cent.
Manganese	not more than 0·5		per cent.
Nickel	not less than 4·0	nor more than 4·5	per cent.
Chromium	not less than 1·0	nor more than 1·4	per cent.
Molybdenum	not less than 0·15	nor more than 0·35	per cent.
Sulphur	not more than 0·045		per cent.
Phosphorus	not more than 0·045		per cent.

2. PROCESS OF MANUFACTURE. The material shall be manufactured by the electric process.

3. SURFACE DRESSING. The material shall be surface dressed in accordance with the requirements of Clause 1–5 (*d*) (i) (B) of A.S. No. U.10.

4. CONDITION.

(*a*) Bars and billets for forging shall be supplied softened.

(*b*) Black or bright bars for machining shall be supplied softened.

(*c*) Forgings shall be supplied softened.

(*d*) Finished case-hardened parts shall be supplied carburised, refined, hardened and tempered.

[1] This specification is based on British Standard 2S. 82 and replaces Australian Emergency Standard (E)D. 542—1942.

A.S. No. U.33—June 1956

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

AUSTRALIAN STANDARD SPECIFICATION FOR AIRCRAFT MATERIAL

45/55 TON, 12 PER CENT CHROMIUM STEEL (CORROSION-RESISTING)[1]

(LIMITING RULING SECTION 6 IN.)

A. Bars and billets for forging.
B. Black or bright bars for machining.
C. Forgings.
G. Finished heat-treated machined parts.

1. CHEMICAL COMPOSITION. The steel shall contain:

Carbon	not less than 0·18 nor more than 0·27 per cent.
Silicon	not more than 1·0 per cent.
Manganese ..	not more than 1·0 per cent.
Nickel (residual) ..	not more than 1·0 per cent.
Chromium ..	not less than 12·0 nor more than 14·0 per cent.
Sulphur	not more than 0·045 per cent.
Phosphorus ..	not more than 0·045 per cent.

2. PROCESS OF MANUFACTURE. The material shall be manufactured by the electric process.

3. SURFACE DRESSING. The material shall be surface dressed in accordance with the requirements of Clause 1–5 (*d*) (i) (B) of A.S. No. U.10.

4. CONDITION.

(*a*) Bars and billets for forging shall be supplied softened.

(*b*) Black or bright bars for machining larger than the limiting ruling section shall be supplied softened.

(*c*) Black or bright bars for machining up to and including the limiting ruling section shall be supplied hardened and tempered.

(*d*) Forgings shall be supplied hardened and tempered.

(*e*) Finished heat-treated machined parts shall be supplied hardened and tempered.

5. HEAT TREATMENT. The heat treatment to be given to material required in the hardened and tempered condition and to test samples other than those prepared from hardened and tempered material shall be as follows:

Harden in air or oil from a temperature between 950 and 1020° C.

Temper at a suitable temperature between 600 and 750° C.

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[1] This specification is based on British Standard 2S. 62 and replaces Australian Emergency Standard (E)D. 522—1941.

A.S. No. U.34—June 1956

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AUSTRALIAN STANDARD SPECIFICATION FOR AIRCRAFT MATERIAL

45/55 TON, 12 PER CENT CHROMIUM STEEL (CORROSION-RESISTING)[1]

(Free-Machining)

(LIMITING RULING SECTION 6 IN.)

A. Bars and billets for forging.

B. Black or bright bars for machining.

C. Forgings.

G. Finished heat-treated machined parts.

1. CHEMICAL COMPOSITION.[2]

The steel shall contain :

Carbon	.. ..	not less than 0·25 nor more than 0·35 per cent.
Silicon	.. ..	not more than 1·0 per cent.
Manganese	.. ..	not more than 1·5 per cent.
Nickel (residual)	.. ..	not more than 1·0 per cent.
Chromium	.. ..	not less than 12·0 nor more than 14·0 per cent.
Sulphur	.. ..	not more than 0·75 per cent.
Phosphorus	.. ..	not more than 0·045 per cent.

At the option of the manufacturer one or more of the following elements may be present to a total amount of not more than 1·0 per cent.

Selenium	.. ..	not more than 0·6 per cent.
Zirconium	.. ..	not more than 0·6 per cent.
Molybdenum	.. ..	not more than 0·6 per cent.
Lead	.. ..	not more than 0·35 per cent.

2. PROCESS OF MANUFACTURE.

The material shall be manufactured by the electric process.

3. SURFACE DRESSING.

The material shall be surface dressed in accordance with the requirements of Clause 1–5 (*d*) (i) (B) of A.S. No. U.10.

[1] This specification is based on D.T.D. 525.

[2] This composition is the same as that specified in En. 56 DM. B.S. 970.

A.S. No. U. 36—June 1956

STANDARDS ASSOCIATION OF AUSTRALIA

AUSTRALIAN STANDARD SPECIFICATION FOR AIRCRAFT MATERIAL

CHROMIUM-NICKEL STEEL (CORROSION-RESISTING)[1]

(13 TONS 0.1 PER CENT PROOF STRESS)

(LIMITING RULING SECTION 6 IN.)

A. Bars and billets for forging.
B. Black or bright bars for machining.
C. Forgings.

1. CHEMICAL COMPOSITION. The steel shall contain :

Carbon	.. ..	not more than 0·16 per cent.
Silicon	.. ..	not less than 0·20 per cent.
Manganese	.. ..	not more than 2·0 per cent.
Nickel	.. ..	not less than 7·0 nor more than 12·0 per cent.
Chromium	..	not less than 16·0 nor more than 20·0 per cent.
Titanium	.. ..	not less than 4 times the carbon content.
or		
Columbium (Niobium)		not less than 8 times the carbon content.
Sulphur	.. ..	not more than 0·045 per cent.
Phosphorus	..	not more than 0·045 per cent.

The following additional elements may be present at the option of the manufacturer : Tungsten, molybdenum, tantalum, copper or vanadium.

2. PROCESS OF MANUFACTURE. The material shall be manufactured by the electric process.

3. SURFACE DRESSING. The material shall be surface dressed in accordance with the requirements of Clause 1–5 (*d*) (i) (B) of A.S. No. U.10.

4. CONDITION.

(*a*) Bars and billets for forging shall be supplied as rolled or forged.

(*b*) Black bars for machining up to and including 2½ in. ruling section shall be supplied softened.

(*c*) Black bars for machining over 2½ in. ruling section shall be supplied as rolled or forged, and the parts made therefrom shall be softened after machining.

(*d*) Bright bars for machining shall be supplied softened.

(*e*) Forgings shall be supplied softened.

[1] This specification is based on British Standard S. 110 and replaces Australian Emergency Standard (E)D. 529—1941.

A.S. No. U. 11—June 1956

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AUSTRALIAN STANDARD SPECIFICATION FOR AIRCRAFT MATERIAL

FREE-CUTTING STEEL BARS FOR MACHINING[1]

1. MATERIAL. This specification is met by material complying with the requirements of specification En. 1A of B.S. 970, Wrought Steels (Grade 4 of B.S. 32, Steel Bars for the Production of Machined Parts) and by material which complies with the requirements of that specification except that its manganese content is in excess of the limit of 1·20 per cent, but does not exceed 1·50 per cent.

2. COLOUR IDENTIFICATION. The bars shall, unless otherwise agreed between the purchaser and the vendor, be colour identified in accordance with the provisions of A.S. No. U.8.

The colour code for this material is :

RED, BROWN, WHITE.

[1] This specification replaces Australian Emergency Standard No. (E)D. 543—1942.

A.S. No. U. 12—June 1956

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AUSTRALIAN STANDARD SPECIFICATION FOR AIRCRAFT MATERIAL

MILD STEEL BARS AND FORGINGS[1]

(SUITABLE FOR BEARING SHELLS)

A. Bars and billets for forging.
B. Black bars for machining.
C. Forgings.

1. CHEMICAL COMPOSITION.[2] The steel shall contain :

Carbon	not more than 0·15	per cent.
Silicon	not more than 0·35	per cent.
Manganese	not more than 0·6	per cent.
Sulphur	not more than 0·050	per cent.
Phosphorus	not more than 0·050	per cent.

2. PROCESS OF MANUFACTURE. The material shall be manufactured by the open hearth or the electric process.

3. SURFACE DRESSING. The material shall be surface dressed in accordance with the requirements of Clause 1–5 (*d*) (i) (A) of A.S. No. U.10.

4. CONDITION.

(*a*) Bars and billets for forging shall be supplied as rolled or forged.

(*b*) Black bars for machining shall be supplied as rolled or normalised, as specified.

(*c*) Forgings shall be supplied as forged or normalised, as specified.

5. HEAT TREATMENT.

(*a*) The heat treatment to be given to material required in the normalised condition shall be as follows :

Normalise at a temperature between 900 and 950° C.

(*b*) A test sample forged and/or machined to not more than $\frac{1}{2}$ inch in thickness, selected to represent each cast of steel, shall be heated to 1000° C and quenched in water. The sample shall then comply with the requirements of Clause 6 (*b*).

6. HARDNESS TESTS.

(*a*) **Bars and Forgings.** Each bar for machining and each forging shall be hardness tested and the Brinell hardness number so obtained shall not be more than 160.

(*b*) **Quenched Test Sample.** The Brinell hardness number of the test sample prepared in the manner described in Clause 5 (*b*) shall not be more than 285.

[1] This specification replaces Australian Emergency Standard No. (E)D. 519—1940.
[2] This composition is the same as that specified in British Standard S. 91.

A.S. No. U.13—June 1956

STANDARDS ASSOCIATION OF AUSTRALIA

AUSTRALIAN STANDARD SPECIFICATION FOR AIRCRAFT MATERIAL

35 TON STEEL (NORMALISED)[1]

(LIMITING RULING SECTION 6 IN.)

A. Bars and billets for forging.

B. Black or bright bars for machining.

C. Forgings.

1. CHEMICAL COMPOSITION. The steel shall contain :

Carbon	.. ..	not less than 0·30 nor more than 0·45 per cent.
Silicon	.. ..	not less than 0·10 nor more than 0·35 per cent.
Manganese	.. ..	not more than 1·5 per cent.
Nickel (optional)	..	not more than 1·0 per cent.
Sulphur	.. ..	not more than 0·050 per cent.
Phosphorus	..	not more than 0·050 per cent.

2. PROCESS OF MANUFACTURE. The material shall be manufactured by the open hearth or the electric process.

3. SURFACE DRESSING. The material shall be surface dressed in accordance with the requirements of Clause 1–5 (*d*) (i) (A) of A.S. No. U.10.

4. CONDITION.

(*a*) Bars and billets for forging shall be supplied as rolled or forged.

(*b*) Black or bright bars for machining shall be supplied normalised.

(*c*) Forgings shall be supplied normalised.

5. HEAT TREATMENT. The heat treatment to be given to material required in the normalised condition and to test samples other than those prepared from normalised material shall be as follows :

Normalise at a temperature between 830° C and 860° C.

[1] This specification is based on British Standard S. 93.

A.S. No. U. 14—June 1956

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AUSTRALIAN STANDARD SPECIFICATION FOR AIRCRAFT MATERIAL

40 TON CARBON-MANGANESE STEEL[1]

(SUITABLE FOR WELDING)

(LIMITING RULING SECTION 4 IN.)

A. Bars and billets for forging.
B. Black or bright bars for machining.
C. Forgings.
G. Finished heat-treated machined parts.

1. CHEMICAL COMPOSITION. The steel shall contain :

Carbon[2]	not less than 0·15 nor more than 0·25 per cent.
Silicon	not less than 0·10 nor more than 0·35 per cent.
Manganese	not less than 1·3 nor more than 1·7 per cent.
Nickel (residual) ..	not more than 0·40 per cent.
Chromium (residual)	not more than 0·25 per cent.
Molybdenum (residual)	not more than 0·10 per cent.
Sulphur	not more than 0·050 per cent.
Phosphorus	not more than 0·050 per cent.

2. PROCESS OF MANUFACTURE. The material shall be manufactured by the open hearth or the electric process.

3. SURFACE DRESSING. The material shall be surface dressed in accordance with the requirements of Clause 1–5 (*d*) (i) (A) of A.S. No. U.10.

4. CONDITION.

(*a*) Bars and billets for forging shall be supplied as rolled or forged.

(*b*) Black bars for machining larger than the limiting ruling section shall be supplied as rolled.

(*c*) Bright bars for machining larger than the limiting ruling section shall be supplied rolled and bright finished.

(*d*) Black or bright bars for machining up to and including the limiting ruling section shall be supplied hardened and tempered.

(*e*) Forgings shall be supplied hardened and tempered.

(*f*) Finished heat-treated machined parts shall be supplied hardened and tempered.

[1] This specification is based on British Standard S. 92 and replaces Australian Emergency Standard (E)D. 526—1941.

[2] For ruling sections greater than 2½ in. the maximum carbon content may be 0·30 per cent by agreement between purchaser and manufacturer.

A.S. No. U. 15—June 1956

STANDARDS ASSOCIATION OF AUSTRALIA

AUSTRALIAN STANDARD SPECIFICATION FOR AIRCRAFT MATERIAL

"55" TON, 1 PER CENT CHROMIUM-MOLYBDENUM STEEL[1]

(LIMITING RULING SECTION 2½ IN.)

A. Bars and billets for forging.

B. Black or bright bars for machining.

C. Forgings other than those for crank and propeller shafts.

1. CHEMICAL COMPOSITION. The steel shall contain:

Carbon	.. ..	not less than 0·35 nor more than 0·45 per cent.
Silicon	.. ..	not less than 0·10 nor more than 0·35 per cent.
Manganese	.. ..	not less than 0·50 nor more than 0·80 per cent.
Chromium	.. ..	not less than 0·90 nor more than 1·20 per cent.
Molybdenum	.. ..	not less than 0·20 nor more than 0·35 per cent.
Sulphur	.. ..	not more than 0·045 per cent.
Phosphorus	..	not more than 0·045 per cent.

2. PROCESS OF MANUFACTURE. The material shall be manufactured by the open hearth or the electric process.

3. SURFACE DRESSING. The material shall be surface dressed in accordance with the requirements of Clause 1–5 (*d*) (i) (B) of A.S. No. U.10.

4. CONDITION.

(*a*) Bars and billets for forging shall be supplied softened.

(*b*) Black or bright bars for machining shall be supplied hardened and tempered.

(*c*) Forgings shall be supplied hardened and tempered.

5. HEAT TREATMENT. The heat treatment to be given to material required in the hardened and tempered condition and to test samples other than those prepared from hardened and tempered material shall be as follows:

Harden in oil from a temperature between 850° C and 870° C.

Temper at a suitable temperature between 550° C and 720° C.

[1] This specification is based on En. 19A, B.S. 970, Condition T.

A.S. No. U.16—June 1956

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AUSTRALIAN STANDARD SPECIFICATION FOR AIRCRAFT MATERIAL

"55" TON, 1½ PER CENT NICKEL-CHROMIUM-MOLYBDENUM STEEL[1]

(LIMITING RULING SECTION 4 IN.)[2]

A. Bars and billets for forging.
B. Black or bright bars for machining.
C. Forgings other than those for crank and propeller shafts.
D. Forgings for crank and propeller shafts.
G. Finished heat-treated machined parts.

For this material in other tensile ranges see :
A.S. No. U.18, 65 Ton, 1½ Per Cent Nickel-Chromium-Molybdenum Steel.

1. CHEMICAL COMPOSITION.[3] The steel shall contain :

Carbon ..	.. not less than 0·35	nor more than 0·45	per cent.
Silicon ..	.. not less than 0·10	nor more than 0·35	per cent.
Manganese	.. not less than 0·45	nor more than 0·7	per cent.
Nickel ..	.. not less than 1·3	nor more than 1·8	per cent.
Chromium	.. not less than 0·9	nor more than 1·4	per cent.
Molybdenum	.. not less than 0·20	nor more than 0·35	per cent.
Sulphur	.. not more than 0·045	per cent.	
Phosphorus	.. not more than 0·045	per cent.	

2. PROCESS OF MANUFACTURE. The material shall be manufactured by the open hearth or the electric process.

3. SURFACE DRESSING. The material shall be surface dressed in accordance with the requirements of Clause 1–5 (*d*) (i) (B) of A.S. No. U.10.

4. CONDITION.

(*a*) Bars and billets for forging shall be supplied softened.

(*b*) Black or bright bars for machining larger than the limiting ruling section shall be supplied softened.

(*c*) Black or bright bars for machining up to and including the limiting ruling section shall be supplied hardened and tempered.

(*d*) Forgings shall be supplied hardened and tempered.

(*e*) Finished heat-treated machined parts shall be supplied hardened and tempered.

[1] This specification is based on British Standard S. 95.

[2] For ruling sections less than 2½ in. it is recommended that material complying with A.S. No. U.15, "55" Ton, 1 Per Cent Chromium-Molybdenum Steel, be used in preference to material complying with this specification.

[3] This composition is the same as that specified in En. 24, B.S. 970, except for the sulphur and phosphorus limits.

A.S. No. U. 18—June 1956

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AUSTRALIAN STANDARD SPECIFICATION FOR AIRCRAFT MATERIAL

65 TON, 1½ PER CENT NICKEL-CHROMIUM-MOLYBDENUM STEEL[1]

(LIMITING RULING SECTION 2½ IN.)

A. Bars and billets for forging.
B. Black or bright bars for machining.
C. Forgings other than those for crank and propeller shafts.
G. Finished heat-treated machined parts.

For this material in other tensile ranges see :
A.S. No. U.16, " 55 " Ton, 1½ Per Cent Nickel-Chromium-Molybdenum Steel.

1. CHEMICAL COMPOSITION.[2] The steel shall contain :

Carbon	.. ..	not less than 0·35 nor more than 0·45 per cent.
Silicon	.. ..	not less than 0·10 nor more than 0·35 per cent.
Manganese	.. ..	not less than 0·45 nor more than 0·7 per cent.
Nickel	.. ..	not less than 1·3 nor more than 1·8 per cent.
Chromium	.. ..	not less than 0·9 nor more than 1·4 per cent.
Molybdenum	.. ..	not less than 0·20 nor more than 0·35 per cent.
Sulphur	.. ..	not more than 0·045 per cent.
Phosphorus	.. ..	not more than 0·045 per cent.

2. PROCESS OF MANUFACTURE. The material shall be manufactured by the open hearth or the electric process.

3. SURFACE DRESSING. The material shall be surface dressed in accordance with the requirements of Clause 1–5 (*d*) (i) (B) of A.S. No. U.10.

4. CONDITION.

(*a*) Bars and billets for forging shall be supplied softened.

(*b*) Black or bright bars for machining larger than the limiting ruling section shall be supplied softened.

(*c*) Black or bright bars for machining up to and including the limiting ruling section shall be supplied hardened and tempered.

(*d*) Forgings shall be supplied hardened and tempered.

(*e*) Finished heat-treated machined parts shall be supplied hardened and tempered.

[1] This specification is based on British Standard S. 119.

[2] This composition is the same as that specified in En. 24, B.S. 970, except for the sulphur and phosphorus limits.

A.S. No. U. 19—June 1956

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AUSTRALIAN STANDARD SPECIFICATION FOR AIRCRAFT MATERIAL

65 TON, 2½ PER CENT NICKEL-CHROMIUM-MOLYBDENUM STEEL[1]

(LIMITING RULING SECTION 6 IN.)[2]

A. Bars and billets for forging.
B. Black or bright bars for machining.
C. Forgings other than those for crank and propeller shafts.
D. Forgings for crank and propeller shafts.
G. Finished heat-treated machined parts.

For this material in other tensile ranges see :
A.S. No. U.17, "55" Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel.
A.S. No. U.20, 75 Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel.
A.S. No. U.22, 80 Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel.
A.S. No. U.24, 100 Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel.

1. CHEMICAL COMPOSITION.[3] The steel shall contain :

Carbon	not less than 0·27	nor more than 0·35	per cent.
Silicon	not less than 0·10	nor more than 0·35	per cent.
Manganese	not less than 0·5	nor more than 0·7	per cent.
Nickel	not less than 2·3	nor more than 2·8	per cent.
Chromium	not less than 0·5	nor more than 0·8	per cent.
Molybdenum	not less than 0·4	nor more than 0·7	per cent.
Sulphur	not more than 0·045	per cent.	
Phosphorus	not more than 0·045	per cent.	

2. PROCESS OF MANUFACTURE. The material shall be manufactured by the open hearth or the electric process.

3. SURFACE DRESSING. The material shall be surface dressed in accordance with the requirements of Clause 1–5 (*d*) (i) (B) of A.S. No. U.10.

[1] This specification is based on British Standard S. 97.

[2] For ruling sections less than 2½ in. it is recommended that material complying with A.S. No. U.18, 65 Ton 1½ Per Cent Nickel-Chromium-Molybdenum Steel, be used in preference to material complying with this specification.

[3] This composition is the same as that specified in En. 25, B.S. 970, except for the sulphur and phosphorus limits.

A.S. No. U. 20—June 1956

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AUSTRALIAN STANDARD SPECIFICATION FOR AIRCRAFT MATERIAL

75 TON, 2½ PER CENT NICKEL-CHROMIUM-MOLYBDENUM STEEL[1]

(LIMITING RULING SECTION 2½ IN.)

A. Bars and billets for forging.
B. Black or bright bars for machining.
C. Forgings other than those for crank and propeller shafts.
G. Finished heat-treated machined parts.

For this material in other tensile ranges see :
A.S. No. U.17, "55" Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel.
A.S. No. U.19, 65 Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel.
A.S. No. U.22, 80 Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel.
A.S. No. U.24, 100 Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel.

1. CHEMICAL COMPOSITION. The steel shall contain :

Carbon	not less than 0·27	nor more than 0·35	per cent.
Silicon	not less than 0·10	nor more than 0·35	per cent.
Manganese	not less than 0·5	nor more than 0·7	per cent.
Nickel	not less than 2·3	nor more than 2·8	per cent.
Chromium	not less than 0·5	nor more than 0·8	per cent.
Molybdenum	not less than 0·4	nor more than 0·7	per cent.
Sulphur	not more than 0·045 per cent.		
Phosphorus	not more than 0·045 per cent.		

2. PROCESS OF MANUFACTURE. The material shall be manufactured by the open hearth or the electric process.

3. SURFACE DRESSING. The material shall be surface dressed in accordance with the requirements of Clause 1–5 (*d*) (i) (B) of A.S. No. U.10.

4. CONDITION.
(*a*) Bars and billets for forging shall be supplied softened.
(*b*) Black or bright bars for machining shall be supplied softened.
(*c*) Forgings shall be supplied softened.
(*d*) Finished heat-treated machined parts shall be supplied hardened and tempered.

[1] This specification is based on En. 25, B.S. 970.

A.S. No. U. 21—June 1956

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AUSTRALIAN STANDARD SPECIFICATION FOR AIRCRAFT MATERIAL

75 TON, 2½ PER CENT NICKEL-CHROMIUM-MOLYBDENUM STEEL (HIGH-CARBON)

(LIMITING RULING SECTION 6 IN.)[2]

A. Bars and billets for forging.
B. Black or bright bars for machining.
C. Forgings other than those for crank and propeller shafts.
D. Forgings for crank and propeller shafts.
G. Finished heat-treated machined parts.

For this material in other tensile ranges see :
A.S. No. U.23, 80 Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel (High-Carbon).

1. CHEMICAL COMPOSITION. The steel shall contain :

Carbon	not less than 0·36 nor more than 0·44	per cent.
Silicon	not less than 0·10 nor more than 0·35	per cent.
Manganese	not less than 0·50 nor more than 0·70	per cent.
Nickel	not less than 2·3 nor more than 2·8	per cent.
Chromium	not less than 0·5 nor more than 0·8	per cent.
Molybdenum	not less than 0·4 nor more than 0·7	per cent.
Sulphur	not more than 0·045	per cent.
Phosphorus	not more than 0·045	per cent.

2. PROCESS OF MANUFACTURE. The material shall be manufactured by the electric process.

3. SURFACE DRESSING. The material shall be surface dressed in accordance with the requirements of Clause 1–5 (*d*) (i) (B) of A.S. No. U.10.

4. CONDITION.
(*a*) Bars and billets for forging shall be supplied softened.
(*b*) Black or bright bars for machining shall be supplied softened.
(*c*) Forgings shall be supplied softened.
(*d*) Finished heat-treated machined parts shall be supplied hardened and tempered.

[1] This specification is based on British Standard S. 98.
[2] For ruling sections less than 2½ in. it is recommended that material complying with A.S. No. U.20, 75 Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel, be used in preference to material complying with this specification.
[3] This composition is the same as that specified in En. 26, B.S. 970, except for the sulphur and phosphorus limits.

A.S. No. U. 23—June 1956

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AUSTRALIAN STANDARD SPECIFICATION FOR AIRCRAFT MATERIAL

80 TON, 2½ PER CENT NICKEL-CHROMIUM-MOLYBDENUM STEEL (HIGH-CARBON)[1]

(LIMITING RULING SECTION 6 IN.)[2]

A. Bars and billets for forging.
B. Black or bright bars for machining.
C. Forgings other than those for crank and propeller shafts.
D. Forgings for crank and propeller shafts.
G. Finished heat-treated machined parts.

For this material in other tensile ranges see :
A.S. No. U.21, 75 Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel (High-Carbon).

1. CHEMICAL COMPOSITION.[3] The steel shall contain :

Carbon	not less than 0·36	nor more than 0·44	per cent.
Silicon	not less than 0·10	nor more than 0·35	per cent.
Manganese	not less than 0·5	nor more than 0·7	per cent.
Nickel	not less than 2·3	nor more than 2·8	per cent.
Chromium	not less than 0·5	nor more than 0·8	per cent.
Molybdenum	not less than 0·4	nor more than 0·7	per cent.
Sulphur	not more than 0·045		per cent.
Phosphorus	not more than 0·045		per cent.

2. PROCESS OF MANUFACTURE. The material shall be manufactured by the electric process.

3. SURFACE DRESSING. The material shall be surface dressed in accordance with the requirements of Clause 1–5 (*d*) (i) (B) of A.S. No. U.10.

4. CONDITION.

(*a*) Bars and billets for forging shall be supplied softened.
(*b*) Black or bright bars for machining shall be supplied softened.
(*c*) Forgings shall be supplied softened.
(*d*) Finished heat-treated machined parts shall be supplied hardened and tempered.

[1] This specification is based on British Standard S. 99.
[2] For ruling sections less than 2½ in. it is recommended that material complying with A.S. No. U.22, 80 Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel, be used in preference to material complying with this specification.
[3] This composition is the same as that specified in En. 26, B.S. 970, except for the sulphur and phosphorus limits.

A.S. No. U. 24—June 1956

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AUSTRALIAN STANDARD SPECIFICATION FOR AIRCRAFT MATERIAL

100 TON, 2½ PER CENT NICKEL-CHROMIUM-MOLYBDENUM STEEL (OIL-HARDENING)[1]

(LIMITING RULING SECTION 2½ IN.)

A. Bars and billets for forging.
B. Black or bright bars for machining.
C. Forgings other than those for crank and propeller shafts.
G. Finished heat-treated machined parts.

For this material in other tensile ranges see :

A.S. No. U.17, "55" Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel.
A.S. No. U. 19, 65 Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel.
A.S. No. U.20, 75 Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel.
A.S. No. U.22, 80 Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel.

1. CHEMICAL COMPOSITION.[2] The steel shall contain :

Carbon	not less than 0·27	nor more than 0·35	per cent.
Silicon	not less than 0·10	nor more than 0·35	per cent.
Manganese	not less than 0·5	nor more than 0·7	per cent.
Nickel	not less than 2·3	nor more than 2·8	per cent.
Chromium	not less than 0·5	nor more than 0·8	per cent.
Molybdenum	not less than 0·4	nor more than 0·7	per cent.
Sulphur	not more than 0·045		per cent.
Phosphorus	not more than 0·045		per cent.

2. PROCESS OF MANUFACTURE. The material shall be manufactured by the electric process.

3. SURFACE DRESSING. The material shall be surface dressed in accordance with the requirements of Clause 1–5 (*d*) (i) (B) of A.S. No. U.10.

4. CONDITION.

(*a*) Bars and billets for forging shall be supplied softened.
(*b*) Black or bright bars for machining shall be supplied softened.
(*c*) Forgings shall be supplied softened.
(*d*) Finished heat-treated machined parts shall be supplied hardened and tempered.

[1] This specification is based on British Standard S. 120.

[2] This composition is the same as that specified in En. 25, B.S. 970, except for the sulphur and phosphorus limits.

A.S. No. U. 25—June 1956

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AUSTRALIAN STANDARD SPECIFICATION FOR AIRCRAFT MATERIAL

AIR-HARDENING, 4¼ PER CENT NICKEL-CHROMIUM-MOLYBDENUM STEEL[1]

(LIMITING RULING SECTION 2½ IN.)[2]

A. Bars and billets for forging.
B. Black or bright bars for machining.
C. Forgings other than those for crank and propeller shafts.
G. Finished heat-treated machined parts.

1. CHEMICAL COMPOSITION.[3] The steel shall contain:

Carbon	not less than 0·26	nor more than 0·34	per cent.
Silicon	not less than 0·10	nor more than 0·35	per cent.
Manganese	not less than 0·4	nor more than 0·6	per cent.
Nickel	not less than 3·9	nor more than 4·3	per cent.
Chromium	not less than 1·1	nor more than 1·4	per cent.
Molybdenum	not less than 0·2	nor more than 0·4	per cent.
Sulphur	not more than 0·045 per cent.		
Phosphorus	not more than 0·045 per cent.		

2. PROCESS OF MANUFACTURE. The material shall be manufactured by the electric process.

3. SURFACE DRESSING. The material shall be surface dressed in accordance with the requirements of Clause 1–5 (*d*) (i) (B) of A.S. No. U.10.

4. CONDITION.

(*a*) Bars and billets for forging shall be supplied softened.

(*b*) Black or bright bars for machining shall be supplied softened.

(*c*) Forgings shall be supplied softened.

(*d*) Finished heat-treated machined parts shall be supplied hardened and tempered.

[1] This specification is based on British Standard 3S. 28 and replaces Australian Emergency Standard (E)D. 508—1940.

[2] For applications where oil-hardened material is suitable it is recommended that material complying with A.S. No. U.24, 100 Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel (Oil-Hardening), be used in preference to material complying with this specification.

[3] This composition is the same as that specified in En. 30B, B.S. 970, except for the sulphur and phosphorus limits.

A.S. No. U. 26—June 1956

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AUSTRALIAN STANDARD SPECIFICATION FOR AIRCRAFT MATERIAL

CARBON CASE-HARDENING STEEL[1]

A. Bars and billets for forging.
B. Black or bright bars for machining.
C. Forgings.
E. Finished case-hardened parts.

1. CHEMICAL COMPOSITION.

(*a*) **Bars Not Exceeding ½ in. Diameter.** The steel shall contain :

Carbon	.. ..	not less than 0·10 nor more than 0·15 per cent.
Silicon	.. ..	not less than 0·10 nor more than 0·35 per cent.
Manganese	..	not less than 0·40 nor more than 1·1 per cent.
Nickel (residual)	..	not less than 0·30 per cent.
Sulphur	.. ..	not less than 0·050 per cent.
Phosphorus	..	not less than 0·050 per cent.

(*b*) **Bars Exceeding ½ in. Diameter.** The steel shall contain :

Carbon	.. ..	not less than 0·10 nor more than 0·18 per cent.
Silicon	.. ..	not less than 0·10 nor more than 0·35 per cent.
Manganese	..	not less than 0·5 nor more than 1·1 per cent.
Nickel (residual)	..	not more than 0·30 per cent.
Sulphur	.. ..	not more than 0·050 per cent.
Phosphorus	..	not more than 0·050 per cent.

2. PROCESS OF MANUFACTURE. The material shall be manufactured by the open hearth or the electric process.

3. SURFACE DRESSING. The material shall be surface dressed in accordance with the requirements of Clause 1–5 (*d*) (i) (A) of A.S. No. U.10.

4. CONDITION.

(*a*) Bars and billets for forging shall be supplied as rolled or forged.

(*b*) Black bars for machining shall be supplied as rolled.

(*c*) Bright bars for machining shall be supplied rolled and bright finished.

(*d*) Forgings shall be supplied normalised.

(*e*) Finished case-hardened parts shall be supplied carburised, refined, and hardened.

[1] This specification is based on British Standard 3S. 14 and replaces Australian Emergency Standard (E)D. 503—1940.

A.S. No. U. 22—June 1956

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AUSTRALIAN STANDARD SPECIFICATION FOR AIRCRAFT MATERIAL

80 TON, 2½ PER CENT NICKEL-CHROMIUM-MOLYBDENUM STEEL[1]

(LIMITING RULING SECTION 2½ IN.)

A. Bars and billets for forging.
B. Black or bright bars for machining.
C. Forgings other than those for crank and propeller shafts.
G. Finished heat-treated machined parts.

For this material in other tensile ranges see :

A.S. No. U.17, "55" Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel.
A.S. No. U.19, 65 Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel.
A.S. No. U.20, 75 Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel.
A.S. No. U.24, 100 Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel.

1. CHEMICAL COMPOSITION. The steel shall contain :

Carbon	not less than 0·27	nor more than 0·35	per cent.
Silicon	not less than 0·10	nor more than 0·35	per cent.
Manganese	not less than 0·5	nor more than 0·7	per cent.
Nickel	not less than 2·3	nor more than 2·8	per cent.
Chromium	not less than 0·5	nor more than 0·8	per cent.
Molybdenum	not less than 0·4	nor more than 0·7	per cent.
Sulphur	not more than 0·045 per cent.		
Phosphorus	not more than 0·045 per cent.		

2. PROCESS OF MANUFACTURE. The material shall be manufactured by the electric process.

3. SURFACE DRESSING. The material shall be surface dressed in accordance with the requirements of Clause 1–5 (*d*) (i) (B) of A.S. No. U.10.

4. CONDITION.

(*a*) Bars and billets for forging shall be supplied softened.
(*b*) Black or bright bars for machining shall be supplied softened.
(*c*) Forgings shall be supplied softened.
(*d*) Finished heat-treated machined parts shall be supplied hardened and tempered.

[1] This specification is based on En. 25, B.S. 970.

A.S. No. U. 17—June 1956

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AUSTRALIAN STANDARD SPECIFICATION FOR AIRCRAFT MATERIAL

"55" TON, 2½ PER CENT NICKEL-CHROMIUM-MOLYBDENUM STEEL[1]

(LIMITING RULING SECTION 6 IN.)[2]

A. Bars and billets for forging.
B. Black or bright bars for machining.
C. Forgings other than those for crank and propeller shafts.
D. Forgings for crank and propeller shafts.
G. Finished heat-treated machined parts.

For this material in other tensile ranges see :
A.S. No. U.19, 65 Ton, 2½ Per cent Nickel-Chromium-Molybdenum Steel.
A.S. No. U.20, 75 Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel.
A.S. No. U.22, 80 Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel.
A.S. No. U.24, 100 Ton, 2½ Per Cent Nickel-Chromium-Molybdenum Steel.

1. CHEMICAL COMPOSITION.[3] The steel shall contain :

Carbon	not less than 0·27	nor more than 0·35	per cent.
Silicon	not less than 0·10	nor more than 0·35	per cent.
Manganese	not less than 0·5	nor more than 0·7	per cent.
Nickel	not less than 2·3	nor more than 2·8	per cent.
Chromium ..	not less than 0·5	nor more than 0·8	per cent.
Molybdenum ..	not less than 0·4	nor more than 0·7	per cent.
Sulphur	not more than 0·045		per cent.
Phosphorus ..	not more than 0·045		per cent.

2. PROCESS OF MANUFACTURE. The material shall be manufactured by the open hearth or the electric process.

3. SURFACE DRESSING. The material shall be surface dressed in accordance with the requirements of Clause 1–5 (*d*) (i) (B) of A.S. No. U.10.

[1] This specification is based on British Standard S. 96.

[2] For ruling sections less than 4 in. it is recommended that material complying with A.S. No. U.15, "55" Ton, 1 Per Cent Chromium-Molybdenum Steel, or A.S. No. U.16, "55" Ton, 1½ Per Cent Nickel-Chromium-Molybdenum Steel, as appropriate, be used in preference to material complying with this specification.

[3] This composition is the same as that specified in En. 25, B.S. 970, except for the sulphur and phosphorus limits.

Endorsement Slip February 1956

British Standard Specification 907: 1954

DIAL GAUGES FOR LINEAR MEASUREMENT

is endorsed as

AUSTRALIAN STANDARD SPECIFICATION

No. B. 80—1955 X-T59

Without Amendment .37

STANDARDS ASSOCIATION OF AUSTRALIA

Science House, Gloucester and Essex Streets, Sydney

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

AMENDMENT No. 3

to

SAA Approval and Test Specification

for

DOMESTIC ELECTRIC RANGES

(No. C. 146—1952 Ap.)

First Issued . . . . . June 1949
Amended (and Redated) . . April 1952
Amended (and Redated) . October 1954
Amended . . . . . February 1957

The above specification is amended as set out hereunder; the amendments should be inserted at the appropriate places.

Clause 7. Guarding of Elements and Live Parts.

(e) Materials of Guards.

In the last sentence, amend the term "stainless steel" to read "stabilised stainless steel." AMDT. No. 3 FEB. 1957

Include a footnote, applicable to this new term, reading as follows:

"For the purpose of this requirement, unstabilised 18/8 stainless steel is not deemed to be an acceptable material."

Applicable on Publication.

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

AMENDMENT No. 3

to

SAA Approval and Test Specification for ELECTRIC GRILLERS (INCL. GRILL-BOILERS, BOILING PLATES, AND THE LIKE) ELECTRIC GRILLERS

(No. C. 102—1952 Ap.)

First Issued	1937
Revised Edition	1940
Revised Edition	1949
Reprinted incorporating Amendment No. 1	1952
Amended and Redated	October 1954
Amended	February 1957

The above specification is amended as set out hereunder; the amendments should be inserted at the appropriate places in the Code.

Clause 7. Guarding of Elements and Live Parts.

(d) Material for Guards.

In the last sentence, amend the term "stainless steel" to read "stabilised stainless steel." Include a footnote, applicable to this new term, reading as follows:

AMDT. No. 3 FEB. 1957

"For the purpose of this requirement, unstabilised 18/8 stainless steel is not deemed to be an acceptable material."

Applicable on Publication.

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

AMENDMENT No. 2

to

SAA Approval and Test Specification

for

INSULATING PANELS

(Including Composition Boards and Synthetic Resin Bonded Sheets for Switchboard Panels)

(No. C. 108—1951 Ap.)

First Published 1937
Revised 1951
Amended . . . . . April 1956
Amended . . . . . February 1957

The above specification is amended as follows; the amendments should be inserted at the appropriate places.

Clause 8. Insulation Resistance.

Clause 9. Electric Strength.

Include a footnote applying to these two clauses reading as follows:

"Insulation resistance and electric strength tests on switchboard panel material shall be so conducted that an identification marking is in the path of the test current." AMDT. No. 2 FEB. 1957

Applicable on Publication.

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

AMENDMENT No. 2

to

SAA Approval and Test Specification

for

PLUGS AND PLUG SOCKETS

(No. C. 112—1955 Ap.)

First Issued	December 1937
Revised Edition	July 1940
2nd Revised Edition	October 1951
Emergency Amendment	January 1952
Reprinted	September 1952
Amended (and Redated)	June 1955
Amended	February 1957

The above specification is amended as set out hereunder; the amendments should be inserted at the appropriate places.

Add a new Clause 7A as follows:

"7A. **Internal Connections.** In the case of plugs provided with earthing connections, the design and construction shall be such that, when the plug is completely assembled and correctly wired

AMDT. No. 2
FEB. 1957

(i) a loose terminal screw cannot bridge a live terminal and the earthing terminal, and

(ii) the earthing terminal is effectively isolated from contact with a live conductor which has become detached from its terminal, and

(iii) the live terminals are effectively isolated from contact with an earthing conductor which has become detached from its terminal."

Applicable on Publication.

STANDARDS ASSOCIATION OF AUSTRALIA

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AMENDMENT No. 1

to

SAA Approval and Test Specification

for

ELECTRIC DRY SHAVERS AND HAIR CLIPPERS

(No. C. 125—1952 Ap.)

First Published 1939
Second Edition 1952
Amended . . . . . February 1957

The above specification is amended as set out hereunder; the amendments should be inserted at the appropriate places.

Clause 13. Flexible Cords.

Delete this Clause and substitute the following:

"13. **FLEXIBLE CORDS.** Any flexible cord for use with an electric dry shaver or hair-clipper shall comply with the appropriate requirements of SAA Approval and Test Specification No. C. 116, Rubber-insulated Cables and Flexible Cords, or No. C. 147, PVC-insulated Cables and Flexible Cords." AMDT. No. 1 FEB. 1957

Delete the footnote on Page 6.

Appendix A.

Delete this Appendix.

Applicable on Publication.

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

Australian Standard No. Z. 9-1957

BAROMETER CONVENTIONS AND TABLES

British Standard 2520:1954, Barometer Conventions and Tables, has been endorsed as Australian Standard No. Z. 9-1957.

To avoid reprinting B.S. 2520 as an Australian standard, the attached endorsement and amendment slips have been issued.

The endorsement slip should be attached to the cover of B.S. 2520 for use in Australia and the amendment inserted at the appropriate page.

Page 12. **Appendix C. The Testing of Barometers.** Substitute the following:

"The testing of barometers at the National Standards Laboratory is based on these Australian standard barometer conventions. For the time being the tests will be extended to barometers which were in service before the issue of this standard but have not yet been converted to comply with it; the pressure scales of such barometers must, however, be inscribed with the legends required by Clause 4 (p. 9) of this specification.

Further information relating to the use of the new conventions in the N.S.L. tests may be obtained on application to the Chief, Division of Metrology, National Standards Laboratory, Chippendale, N.S.W.

Facilities for testing of barometers are also offered by certain laboratories registered for the purpose with the National Association of Testing Authorities."

STANDARDS ASSOCIATION OF AUSTRALIA
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AMENDMENT No. 2

to

SAA Approval and Test Specification

for

RADIO INTERFERENCE SUPPRESSION DEVICES

FOR

LOW AND MEDIUM VOLTAGE EQUIPMENT

(No. C. 145—1954 Ap.)

First Published (Supplementary Series) 1941
Revised Edition 1954
Amended . . . . . April 1956
Amended . . . . . February 1957

The above specification is amended as follows; the amendments should be inserted at the appropriate places.

Clause 16. Testing of Capacitors.

(b) **Capacitance.**

After the second paragraph, add the following note:

"**NOTE:** A simple method of carrying out this test is to connect the capacitor across rated voltage, measure the charging current, and determine the capacitance from the formula— AMDT. No. 2 FEB. 1957

$$C = \frac{1 \times 10^6}{2\pi fE}$$

where C = capacity in microfarads,
E = R.M.S. rated voltage,
I = current in amperes,
f = frequency.

Applicable on Publication.

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

AMENDMENT No. 3
to
SAA Code for
COMPRESSED GAS CYLINDERS
(A.S. No. C.B. 4—1950)

First Issued	1931
Revised Edition	1950
Amended (and Redated)	March 1952
Amended (and Redated)	January 1955
Amended	November, 1956

The above specification is amended as set out hereunder: (the amendments should be inserted at the appropriate places in the Code).

Page 14. Table 1. Cylinder Specification for Permanent Gases. AMDT. No. 3 Nov. 1956

Add under column (2) headed "Australian Standard No." the specifications numbered "B. 110" and "B. 111."

Page 15. Table II. Filling Ratios and Cylinder Specifications for Liquefiable Gases. AMDT. No. 3 Nov. 1956

Under heading "High Pressure Liquefiable Gases" add to column (4) headed "Australian Standard Spec. No." the specification number "B. 111."

Add under headings "Medium Pressure Liquefiable Gases," and "Low Pressure Liquefiable Gases" a footnote reading:

Specifications A.S. Nos. B. 11 and B. 111, B.S. 1287 and B.S. 1288 may be used for these gases.

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

AMENDMENT No. 3

to

SAA Approval and Test Specification

for

FLEXIBLE ELECTRIC HEATING PADS

(No. C. 149—1951 Ap.)

First Published 1951
Amended (and Redated) . January 1954
Amended . . . . . April 1956
Amended . . . . . February 1957

The above specification is amended as follows; the amendment should be inserted at the appropriate place.

Clause 14. Testing of Thermostats.

(a) High Voltage Test.

Add a new paragraph reading as follows:

"The high-voltage test may be carried out with suitable insulation (such as a piece of mica) interposed between the contacts." AMDT. No. 3 FEB. 1957

Applicable on Publication.

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

AMENDMENT No. 2

to

SAA Approval and Test Specification

for

PLUGS AND PLUG SOCKETS

(No. C. 112—1955 Ap.)

First Issued	December 1937
Revised Edition	July 1940
2nd Revised Edition	October 1951
Emergency Amendment	January 1952
Reprinted	September 1952
Amended (and Redated)	June 1955
Amended	February 1957

The above specification is amended as set out hereunder; the amendments should be inserted at the appropriate places.

Add a new Clause 7A as follows:

"7A. **Internal Connections.** In the case of plugs provided with earthing connections, the design and construction shall be such that, when the plug is completely assembled and correctly wired. AMDT. No. 2 FEB. 1957

(i) a loose terminal screw cannot bridge a live terminal and the earthing terminal, and

(ii) the earthing terminal is effectively isolated from contact with a live conductor which has become detached from its terminal, and

(iii) the live terminals are effectively isolated from contact with an earthing conductor which has become detached from its terminal."

Applicable on Publication.

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

AMENDMENT No. 2

to

SAA Approval and Test Specification

No. C. 100—1953

DEFINITIONS AND GENERAL REQUIREMENTS

for

ELECTRICAL MATERIALS AND EQUIPMENT

First Published	1937
Second Edition	1940
Reprinted with Amendments	1948
Third Edition	1953
Reprinted	September 1954
Amended	April 1956
Amended	February 1957

The above specification is amended as follows; the amendments should be inserted at the appropriate places.

Clause 93. Facilities for Connection of Flexible Cord.

(d) Location of Terminals.

Amend the second paragraph to read as follows:

"In the case of appliances, the terminal box or enclosure shall be such as allows access to the terminals and replacement of the flexible cord without dismantling the appliance to such an extent as to disturb the assembly of internal wiring and internal live parts." AMDT. No. 2 FEB. 1957

Applicable on Publication.

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AMENDMENT No. 1
to
SAA Approval and Test Specification
for
TRANSFORMERS FOR COLD-CATHODE ELECTRIC DISCHARGE LAMPS AND LIGHTING SYSTEMS
(No. C. 143—1952 Ap.)

First Published (Supplementary Series) 1941
Second Edition 1952
Amended . . . . . February 1957

The above specification is amended as set out hereunder; the amendments should be inserted at the appropriate places.

Clause 9. Output Short-Circuit Current.

(b) Auto-transformers.

Amend the first sentence to read as follows:

"The output short-circuit current in any one set of output leads shall not exceed twice the rated output operating current." AMDT. No. 1 FEB. 1957

Applicable on Publication.

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

AMENDMENT No. 3

SAA Approval and Test Specification

for

ELECTRICAL EQUIPMENT OF PETROL SERVICE PUMPS

(No. C. 123—1951 Ap.)

Specification First Issued 1939
Amended (and Redated) . . . July 1951
Reprinted incorporating Amendment No. 1 . . December 1951
Amended (and Redated) . . . June 1955
Amended . . . . . February 1957

The above specification is amended as set out hereunder; the amendments should be inserted at the appropriate places.

Clause 4. General. Type of Equipment.

Add a note to this Clause reading as follows:

"**NOTE:** In the case of petrol pumps provided with an angular dispensing facility at the top of the pump housing, the area immediately adjacent to such facility, shall be regarded as a Class I, Division 2, location as defined in Part 1 of the SAA Wiring Rules, and any electrical installation therein shall comply with the relevant requirements of the Rules." AMDT. No. 3 FEB. 1957

Clause 7. Switches.

Add a new Clause 7A as follows:

"**7A. Plugs and Plug-Sockets.** Any plug and plug-socket installed within the housing of a petrol AMDT. No. 3 FEB. 1957

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

Australian Standard No. K. 107-1956

SILICA GEL FOR USE AS DESICCANT FOR PACKAGES

British Standard 2540:1954 Silica Gel for Use as Desiccant for Packages has been endorsed with amendment as Australian Standard No. K. 107-1956.

To avoid reprinting B.S. 2540:1954 the attached endorsement and amendment slips have been issued.

The endorsement slip should be attached to the cover of B.S. 2540 for use in Australia and the amendments inserted at the appropriate pages.

Page 5. Foreword. Include the following:

"An indicator grade of silica gel differs only in certain respects from the grade covered by this specification. In this regard attention is drawn to Clause 13."

Page 5. Clause 4. Reaction.

Alter "3.5" to "5.5."

Page 6. Clause 6. Water-soluble Chlorides.

Alter "0.05 per cent to "1.0 per cent."

Page 6. Insert an additional clause (Clause 13) as follows:

"Clause 13. **Impregnation with Indicator.** Pending the issue of a specification for an indicator grade of silica gel, the supply of such material shall be a matter for agreement between purchaser and vendor."

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

Australian Standard No. R.22—1957

DISPENSING MEASURES FOR PHARMACEUTICAL PURPOSES

(Imperial Units)

British Standard 1921 : 1953 Dispensing Measures for Pharmaceutical Purposes (Imperial Units) has been endorsed with amendment as Australian Standard No. R.22-1957.

To avoid reprinting B.S. 1921 : 1953, the attached endorsement and amendment slips have been issued.

The endorsement slip should be attached to the cover of B.S. 1921 for use in Australia, and the amendments inserted at the appropriate pages.

Insert a preface as follows:

PREFACE

In most States of the Commonwealth, pharmacists' measures used for the dispensing of prescriptions are the subject of statutory regulations covering, among other things, the accuracy of graduation, and providing that only measures which have been verified and stamped by the appropriate local authorities may be used. The purpose of this Australian standard is to provide suitable specifications on which the several statutory authorities may base the technical provisions of their regulations, thus attaining Australia-wide uniformity in this respect. In recommending the endorsement of the British standard, the Association's Committees subscribe to the objectives of the British Committee, as set down in the foreword, that is, the provision at a reasonable cost of convenient measures manufactured and graduated to the degree of accuracy required for pharmaceutical work.

Page 5, Foreword. Lines 14 and 15.

For "catagory" read "category."
For "sampling" read "stamping."

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AMENDMENT No. 3
to
A.S. No. CA. 23-1955

AUSTRALIAN STANDARD RULES FOR THE STORAGE AND USE OF EXPLOSIVES
(Known as SAA Explosives Code)

Australian Standard No. CA. 23 is amended as follows; the amendments should be inserted at the appropriate places.

SECTION 10. SPECIAL APPLICATIONS.

Add a new sub-section.

BLASTING IN THE VICINITY OF BUILDINGS AND STRUCTURES.

10-40. **General.** Where blasting is carried out in proximity to buildings and structures or underground services, the precautions listed in Clauses 10-41, 10-42 and 10-43 below should be observed. AMDT. No. 3 FEB., 1957.

10-41. **Fly-rock.** Where it is considered that protection from fly-rock is advisable, blasting mats or other suitable cover shall be used, wherever practicable. In quarry blasting and in other large-scale operations where cover cannot be used, a method of short delay detonation is recommended.

10-42. **Air blast.** Unconfined plaster or blister shots (which are mainly responsible for complaints of alleged damage by air blast) shall be permitted only where drilling of the rock to be blasted is impracticable.

Note: It is recognised that the actual effect of an air blast in well controlled primary shots is negligible but that there may be an undesirable psychological effect.

10-43. **Ground Vibrations.** The blast should be designed to produce an amplitude not exceeding 0.008 inches at the site of a building or structure. (See Appendix A.)

Note: Normally, the amplitude of vibration caused by commercial blasting can readily be restricted to this upper limit.

APPENDIX A.

"Amplitude" (shown as "A" in Fig. A-1 below), as used in Clause 10-43, Ground Vibrations, is defined as: AMDT. No. 3 FEB., 1957.

"The extent of the swing of a vibrating body on each side of the mean position."

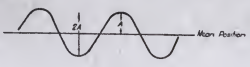

FIG. A-1

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

AMENDMENT No. 4
to
SAA Code for
COMPRESSED GAS CYLINDERS
(A.S. No. CB.4—1950)

First Issued	1931
Revised Edition	1950
Amended (and Redated)	March, 1952
Amended (and Redated)	January, 1955
Amended	November, 1956
Amended	May, 1957

The above specification is amended as set out hereunder: (the amendments should be inserted at the appropriate places in the Code).

Page 3. Rule 1 – 1 Scope. Add the following note:

AMDT. No. 4 MAY, 1957

Note: Cylinders forming part of aircraft equipment, and used solely in aircraft, are exempt from the requirements of this Code.

Page 14. Table I.

AMDT. No. 4 MAY, 1957

Delete main heading to column 4 and substitute:

"Approved for use when manufactured to ICC Regulations*."

Add the following footnote:

"*ICC Regulations are at present covered by 'H. A. Campbell's Tariff No. 10 Interstate Commerce Commission Regulations for Transport of Explosives and Other Dangerous Articles, etc.', and subsequent supplements."

Endorsement Slip August, 1957

British Standard 1121 : Part 13 : 1954

is endorsed as

AUSTRALIAN STANDARD SPECIFICATION

No. K.1, Part 9-1957

METHOD FOR THE DETERMINATION OF CHROMIUM IN IRON AND STEEL

Subject to amendments as indicated.

STANDARDS ASSOCIATION OF AUSTRALIA
Science House, Gloucester and Essex Streets, Sydney

July 1957

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

CORRIGENDA
to
August 1956 Reprint
of
SAA Approval and Test Specification No. C. 100 — 1953 Ap.
DEFINITIONS AND GENERAL REQUIREMENTS
FOR ELECTRICAL MATERIALS AND EQUIPMENT

Page 20. Clause 113(d). Marking of Earth Connections. *Delete* the final paragraph covered by the marginal reference "Amendment No. 2, August, 1956."

Note: This requirement has not been approved, and was included inadvertently in this reprint of C. 100.

Page 18. Table I. In the marginal date reference to Amendment No. 1, *amend* "August" to "April."

June, 1957

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

ERRATUM
to
AUSTRALIAN STANDARD
CLASSIFICATION OF COVERED ELECTRODES
(No. B.130 — 1955)

Page 6, Fig. 2 (a).
Delete "Rotation 8°" and *substitute* "Rotation 0°".

June, 1957

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

ERRATUM
to

AUSTRALIAN STANDARD CLASSIFICATION OF COVERED ELECTRODES (No. B.130 — 1955)

Page 6, Fig. 2 (a).
Delete "Rotation 8°" and *substitute* "Rotation 0°".

June, 1957

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

ERRATUM
to
Australian Standard Specification
for
COVERED ELECTRODES
FOR METAL ARC WELDING
OF CARBON STEEL
(No. B.28 — 1955)

Page 9, Clause 2-1 (d), line 13.
Delete "$\frac{1}{8}$ inch" and *substitute* "$\frac{1}{16}$ inch".

June, 1957

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

ERRATUM
to
Australian Standard Specification
for
COVERED ELECTRODES
FOR METAL ARC WELDING
OF CARBON STEEL
(No. B.28 — 1955)

Page 9, Clause 2-1 (d), line 13.
Delete "$\frac{1}{8}$ inch" and *substitute* "$\frac{1}{16}$ inch".

STANDARDS ASSOCIATION OF AUSTRALIA

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#78

Australian Standard Specification No. K.1:Part 9-1957

METHOD FOR THE DETERMINATION OF CHROMIUM IN IRON AND STEEL

British Standard 1121:Part 13:1954, Chromium in Iron and Steel, has been endorsed with amendment as Australian Standard No. K.1:Part 9:1957.

To avoid reprinting B.S. 1121 : Part 13 : 1954, the attached endorsement and amendment slips have been issued.

The endorsement slip should be attached to the cover of B.S. 1121:Part 13, for use in Australia, and the amendments inserted at the appropriate pages.

Page 4. Section One: Introduction

b. Range.

For "25" read "30."

Page 4. Section One: Introduction

c. Reproducibility.

Insert the following:

"With 30 per cent chromium present ± 0·15 per cent chromium.

Page 6. Section Five: Procedure.

Last line.

For "Note 6" read "Notes 6 and 7."

Page 8. Section Eight: Notes.

Insert an additional note as follows:

"7. For chromium contents above 4 per cent. determine the end point correction as follows and subtract the value from the permanganate back titration: 'Reduce the excess of potassium permanganate with dropwise addition of sodium nitrite solution (0.5 per cent) until the pink colour is discharged, adding not more than 5 drops excess; add 5 ml of sulphamic acid (10 per cent) and mix the solution thoroughly. Titrate this solution with permanganate to the same end point as before.' "

AUSTRALIAN STANDARD No. C.314—1957

FIXED DOMESTIC ELECTRIC WASH-BOILERS

Incorporated by Royal Charter

STANDARDS ASSOCIATION OF AUSTRALIA

AUSTRALIAN STANDARD No. A.35—1957

PRECAST CONCRETE DRAINAGE PIPES

Incorporated by Royal Charter

STANDARDS ASSOCIATION OF AUSTRALIA

AUSTRALIAN STANDARD No. CB. 1, PART III—1957

SAA BOILER CODE—PART III

LOCOMOTIVE BOILERS FOR RAILWAY PURPOSES

PUBLISHED BY
STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AUSTRALIAN STANDARD No. CB. 5 — 1957

SAA CODE FOR OIL FUEL INSTALLATIONS

Incorporated by Royal Charter

STANDARDS ASSOCIATION OF AUSTRALIA

AUSTRALIAN STANDARD No. K.41—1957

STANDARD METHODS OF TEST FOR PAINTS, VARNISHES, LACQUERS AND RELATED MATERIALS

Incorporated by Royal Charter

STANDARDS ASSOCIATION OF AUSTRALIA

AUSTRALIAN STANDARD No. CB.16—1957

AUSTRALIAN STANDARD GENERAL CONDITIONS OF TENDERING AND CONTRACT FOR THE SUPPLY OR THE SUPPLY AND ERECTION OF PLANT AND MACHINERY

Incorporated by Royal Charter STANDARDS ASSOCIATION OF AUSTRALIA

LIST OF METHODS

The methods so far published are:

No. of Method	Date	TITLE	Price
101·1	March 1957	Standard Drying Conditions	1s.
102·1	June 1957	Recommended Sampling Procedure	1s.
103·1	June 1957	Preparation of Samples for Testing—Prepared Paints, Enamels, Varnishes, Lacquers and Similar Products	1s.
104·1	March 1957	Recommended Materials for Test Panels	1s.
105·1	March 1957	Pretreatment of Metal Test Panels—Solvent Cleaning	1s.
105·2	March 1957	Pretreatment of Metal Test Panels—Sanding	1s.
105·3	March 1957	Pretreatment of Metal Test Panels—Chromic Acid Dipping	1s.
107·1	June 1957	Determination of Wet Film Thickness from Dry Film Weight	1s.
107·2	June 1957	Determination of Wet Film Thickness from Wet Film Weight	1s.
107·3	June 1957	Determination of Wet Film Thickness by "Wheel" Gauge	1s.
201·1	June 1957	Preliminary Examination of Prepared Paints, Enamels, Varnishes, Lacquers and Similar Products	1s.
202·1	March 1957	Weight Per Gallon	1s.
203·1	March 1957	Skin Formation	2s.
204·1	March 1957	Fineness of Grind	1s.
205·1	March 1957	Application Properties—Brushing (Brushing Properties)	1s.
208·1	March 1957	Thinning or Mixing Properties	1s.
209·1	March 1957	Re-mixing Properties	1s.
212·1	June 1957	Wet Hiding Power—Black and White Cryptometer	2s.
401·1	March 1957	Surface Dry Condition (Silver Sand Test)	1s.
401·5	March 1957	Hard Dry Condition (Sanding Test)	1s.
402·1	June 1957	Bend Test	1s.
601·1	March 1957	Colour—Visual Comparison	1s.
603·1	March 1957	Finish	1s.

AUSTRALIAN STANDARD No. C.316-1957

AUTOMATIC ELECTRIC STORAGE WATER HEATERS

(15 TO 150 GALLONS CAPACITY)

Incorporated by Royal Charter

STANDARDS ASSOCIATION OF AUSTRALIA

AUSTRALIAN STANDARD No. T.16 — 1959

AGAR IMPRESSION MATERIAL

The Standards Committee of the Australian Dental Association has adopted this specification for use in connection with its scheme for accreditation of certified dental materials, lists of which are published periodically in the dental journals throughout Australia. Enquiries regarding this scheme should be addressed direct to the Australian Dental Association. When used in connection with the scheme the specification is known as Australian Dental Standard No. T.16 (A.D.S. No. T.16)

Incorporated by Royal Charter

PUBLISHED BY THE STANDARDS ASSOCIATION OF AUSTRALIA, 157 GLOUCESTER STREET, SYDNEY.

AUSTRALIAN STANDARD No. L.6 — 1959

Determination of Breaking Load and Elongation of Strips of Woven Textile Fabric

Incorporated by Royal Charter

PUBLISHED BY THE STANDARDS ASSOCIATION OF AUSTRALIA,
157 GLOUCESTER STREET, SYDNEY.

ENDORSED AS PART OF A.S. No. P.1

P423m-62

Tentative Standard—August, 1960.
Revised—August, 1962.

FOLDING ENDURANCE OF PAPER

(This standard is under the jurisdiction of the Testing Committee.)

This standard procedure is for the determination of the folding endurance of paper by means of the Folding Endurance Tester, Kohler-Molin Model. The folding endurance is defined as the number of double folds required to cause rupture in a strip of paper 15 mm. wide tested under an applied stress. A stress of 800 g. is preferred but provision is made for other stresses where necessary for certain papers. (Note 1.)

APPARATUS

1. The Kohler-Molin instrument has two horizontal folding heads, each with a separate revolution counter enabling two tests to be made simultaneously. The folding surfaces are semi-circular in cross section with a radius of 0.25 ± 0.01 mm. The pivot point shall be 0.04 mm. from the edge of the fixed clamp on a line connecting the folding edges of the 2 clamps. The test strip is weight loaded by means of weights which are fitted below the lower clamp. When the lower clamp is in the operating (*i.e.* raised) position the distance between the folding head and the lower clamp shall be 62 ± 1 mm. The load may be varied from 200 to 1,300 g. The folding head moves through an angle of 312°; a complete oscillation of the folding head constitutes one double fold. The folding head makes approximately 200 double folds per minute. A counter records the number of double folds required for rupture. The motive power is transmitted by a belt drive from a motor isolated from the instrument. All other transmission is through fibre to metal gears to limit heat transfer and vibration.

2. Specimen Cutter. A sharp guillotine equipped with a stop which is set so that straight parallel-sided strips of paper of the required width are cut.

TEST SPECIMEN

Condition the paper sample in the standard or other atmosphere in which the testing is to be done in accordance with Appita Standard P414m.

From the sample cut test specimens 15 ± 0.1 mm. wide and at least 100 mm. long, with the long edges parallel and clean cut. Prepare at least ten test specimens in each principal direction of the paper, selecting paper free from obvious manufacturing defects, or water marks.

After conditioning, and throughout the testing, avoid handling that portion of the test specimen that will be placed between the folding head and the lower clamp.

PROCEDURE

Level the fold tester.

Set the folding head so that the gap between the two jaws is in an approximately vertical position. Lock the lower jaw in the raised position. Hold the specimen with its wire side facing the fixed jaw of the upper clamp and with its ends lying centrally between the folding head and the lower clamp. Centre the specimen (Note 2) and tighten the clamps on the folding head and the lower clamps so that the specimen cannot slip during the test. Set the revolution counters to the zero position or record the reading.

Release the lower jaw, start the motor, and continue until the test specimens in both folding heads have broken (breaking of the specimen automatically stops the operation of the counter). Record the number of double folds required to break the specimen, (Notes 3, 4). Remove the test specimen and return the folding head and the lower clamp to their starting position. Test at least ten specimens in each principal direction of the paper in this manner.

Appita
476 Collins Street, Melbourne, Australia.

ENDORSED AS PART OF A.S. No. P.1

P407m—62
Tentative Standard—Feb., 1962.

RING CRUSH TEST

(This Standard is under the jurisdiction of the Testing Committee.)

This test measures the resistance of paperboard to edgewise compression. Corrugated and solid fibreboard containers are subjected to crushing forces in shipment and this test is used for two purposes: (a) to indicate the edgewise rigidity of the board so that manufacturing processes may be controlled to secure the desired results, and (b) to intimate the probable crushing resistance of the finished container when tested according to APPITA Standard P800 (1).

This test is made on the material in both the machine direction (m.d.) and cross machine (c.d.) direction. For the purpose of this method m.d. ring crush is defined as the test made on a sample cut 6 in. c.d. by 0.5 in. m.d. while c.d. ring crush is defined as the test made on a sample cut 6 in. m.d. by 0.5 in. c.d.

This method is intended only for paperboard having a nominal thickness not exceeding 0.040 in.

APPARATUS

1. Motor-driven compression machine with a capacity of at least 300 lb. and meeting the following requirements:

(a) The upper and lower platens, one of which may be fixed and the other is movable, are such that their surfaces remain flat and parallel to each other within 1 part in 2,000 throughout the test and are mounted so as to have not more than 0.002 in. movement in the horizontal direction. The platens may be knurled or have sheets of number 1 emery cloth glued to their surfaces to prevent slipping of the specimen on the platen.

(b) The force is exerted on the specimen between the platens either by causing the movable platen to approach the fixed platen at a uniform speed, or by applying a constantly increasing pressure against the movable platen until the specimen collapses. In either case the applied force is developed at a rate of 15 ± 5 lb./sec. when the platens are in contact.

(c) The applied load is indicated with an accuracy within 1 lb.

Instructions for the adjustment and maintenance of the machine are given in Appendix 1. The method of calibration and verification of the machine is given in Appendix 2.

2. Specimen holder — a circular metal block having a cylindrical hole cut square 0.25 ± 0.01 in. deep, 1,940 ± 0.001 in. inside diameter and with its base parallel with the base of the block to ± .0005 in. A branch groove is cut from the edge of the block tangential to the cylindrical hole to permit insertion of the specimen. A centre 'island' consisting of one of a series of replaceable disks each having a centre pin which fits into a receiving hole in the centre of the block, thus permitting correct centring of the disk and allowing the disk to turn freely as the specimen is inserted through the branch groove, rests in the centre of the cylindrical hole. The disks are of various diameters such that the width of the groove formed between the edge of the disk and the wall of the cylindrical hole may be varied to accommodate specimens of various thicknesses. Disks labelled 10, 13, 17, 20, 23, 27, 31, 35, 40 are used with specimens having nominal thicknesses less than 0.010 in., 0.011 to 0.013 in., 0.014 to 0.017 in. *etc.* respectively. The disks are 0.25 ± 0.01 in. thick and of such a diameter that when inserted in the metal block the annular grooves so produced are 0.011 to 0.012 in., 0.014 to 0.015 in., 0.018 to 0.019 in. *etc.* wide respectively.

3. Sample cutter.—A die cutter or other device capable of cutting samples 6.0 ± 1/32 in. long by 0.50 ± 0.01 in. wide without any tearing or fraying of the long edges.

TEST SPECIMEN

Condition the sample in accordance with APPITA Standard P414 m in the standard or other atmosphere in which the testing is to be done.

Australian Pulp and Paper Industry Technical Association,
476 Collins Street, Melbourne, Australia.

ENDORSED AS PART OF A.S. No. P.1

P406m—62
Recommended Practice—Aug., 1955.
Tentative Standard—Feb., 1962.

BENDING QUALITY OF PAPERBOARD

(This Standard is under the jurisdiction of the Testing Committee.)

This method is designed to give a measure of the bending quality of paperboards; the results obtained give an indication of the creasing requirements of a paperboard during its conversion.

A paperboard of good bending quality can be folded through 180° without rupture along the outside of the fold without first creasing the sample. Paperboards of poorer quality can be folded satisfactorily if they are first creased in an appropriate manner. The severity of creasing required to obtain a rupture-free fold is taken as a measure of bending quality. The quality is designated by a whole number lying within the range 10 (highest quality) to 1 (lowest quality).

APPARATUS

Bending quality instrument

The instrument consists of a number of pairs of metal dies, each pair being mounted separately in a hand-press (Fig. 1). The length of a die is 3 in., the overall width 1 in. and the depth approximately 0.25 in. The cross section of the dies is shown schematically in Fig. 2.

A series of seven pairs of dies comprises one group. A paperboard having a bending quality of 10 requires no creasing, hence no die is required; paperboards of quality 9 and 1 are so close to the extremes of good and bad quality that these dies are omitted from the series. There are seven groups (*i.e.* 49 pairs of dies) in the complete instrument, the groups being designed to test paperboard of different thickness ranges. (Note 1).

On the face of one of the dies in a pair is a creasing rule, on the other die is a groove. The dies are mounted in the press so the the rule and groove mate accurately. The rule and groove are designed to produce varying degrees of shearing or creasing in the paperboard under test. The instrument must be constructed so that the shear angle (Note 2) is within 1° of that specified.

Certain dimensions of the dies together with the corresponding shear angles are given in Table 1, (Note 3).

The pairs of dies are each permanently mounted in individual hand presses. No attempt, other than by one authorised to do so, should be made to adjust the position of one die with respect to the other.

TEST SPECIMEN

Condition the paperboard sample in the standard or other atmosphere in which the testing is to be done in accordance with APPITA Standard P 414m.

From the sample, cut test specimens approximately 4 in. long by $3 \begin{smallmatrix}+0.0\\-0.1\end{smallmatrix}$ in. wide, the shorter dimension being parallel to the direction in which the test specimen is to be creased. For example, cut the test specimens for an 'across the machine direction' test to a length of 4 in. in the machine direction and to a length of 3 in. in the cross machine direction and make the line of the crease at right angles to the machine direction.

PROCEDURE

Fold the test specimen through 180° with the liner or fair side of the board on the outside of the fold. Whilst still folded, examine the outer side of the fold for rupture. If there is no sign of failure report the result as 10; further testing is then unnecessary.

If there is any sign of failure, determine the thickness of the sample to the nearest 0.001 in. From Table 1 select the appropriate group of bending quality presses according to the thickness of the sample.

Australian Pulp and Paper Industry Technical Association,
476 Collins Street, Melbourne, Australia.

P417m-59

ENDORSED AS PART OF A.S. No. P.1

Tentative Standard — November, 1959.
Standard — January, 1962.
Revised — June, 1962.

SAMPLING PAPER FOR TESTING

(This method is under the jurisdiction of the Testing Committee.)

(This method is based on ISO Recommendation R 186: only minor changes have been made in order to comply with the Appita format.)

The present document specifies a method of obtaining a representative sample of a lot of paper for test purposes. The following principles are used when sampling paper:—

(1) Withdraw from each lot a certain number of units;

(2) take from each of these units a certain number of sheets;

(3) cut from these sheets the specimens from which will be taken the test pieces necessary for the various tests.

SCOPE

This method applies in general only to paper of a substance below 250 g./m.^{2}. For certain tests, special methods of sampling will be given in the test of the appropriate method of test.

Note: If, at the time of sampling, less than 50 per cent of the lot remains, sampling will be invalid in the absence of agreement to the contrary.

TERMS

A consignment consists of one or more lots.

The lot is the aggregate of paper of a single kind of specified characteristics.

A lot comprises one or more similar units, such as reels, reams (units or assembled), bales, parcels, cases, *etc.*

The specimens are rectangles of paper cut to given dimensions from the sheets drawn from the selected units.

The sample comprises of all the specimens.

The test piece comprises the quantity of paper on which the test is carried out in accordance with the stipulations of the method of test. It may be taken from a specimen; in certain instances the specimen may be the test piece itself or several specimens.

Selected at random means taken in such a way that each part of the whole has an equal chance of being selected.

PREPARATION OF SPECIMENS

Selection of specimens

The units to be sampled shall be selected according to Table 1.

TABLE 1

Size of lot (n)	Number of units selected	Method of selection
1 to 5 units	all	—
6 to 99 units	5	at random
100 to 399 units*	$\frac{n}{20}$	at random
400 or more units	20	at random

*In deciding the number of units to be selected, any remainder of less than 20 units shall be ignored.

Appita
476 Collins Street, Melbourne, Australia.

ENDORSED AS PART OF A.S. No. P.1

P430-62

Tentative Standard—Feb., 1962.

LINER ADHESION OF CORRUGATED BOARD

(This Standard is under the jurisdiction of the Testing Committee).

The liner adhesion of a corrugated board is defined, for the purposes of this method, as the minimum load necessary to cause complete separation of one of the liner plies from the corrugated medium of the board, when the specified sample is tested under the prescribed conditions.

The load is expressed in pounds weight per 12 in. of flute length.

APPARATUS

1. Motor-driven compression machine with a capacity of at least 300 lb. and meeting the following requirements:

(a) The upper and lower platens, one of which may be fixed and the other is movable, are such that their surfaces remain flat and parallel to each other within 1 part in 2,000 throughout the test and are mounted so as to have not more than 0.002 in. movement in the horizontal direction. The platens may be knurled or have sheets of number 1 emery cloth glued to their surfaces to prevent slipping of the specimen on the platen.

(b) The force is exerted on the specimen between the platens either by causing the movable platen to approach the fixed platen at a uniform speed, or by applying a constantly increasing pressure against the movable platen until the specimen collapses. In either case the applied force is developed at a rate of 15 ± 5 lb./sec. when the platens are in contact.

(c) The applied load is indicated with an accuracy within 1 lb.

Instructions for the adjustment and maintenance of the machine are given in Appendix 1. The method of calibration and verification of the machine is given in Appendix 2.

2. Alternative types of specimen holders for A-flute, B-flute and C-flute corrugated board are shown in Figures 1 and 2. Each pair of A-flute holders consists of one holder with a row of six parallel steel prongs and another with a row of five parallel steel prongs, the prongs being attached to a steel bar and so spaced that adjacent prongs of a holder fit readily into alternate flutes of the board for which they are designed. The B and C-flute holders contain 13 and 14 prongs and six and seven prongs respectively. Variations in the same type of flute made on different corrugating machines may necessitate the use of slightly different holders (Note 1). The prongs of the A, B and C-flute specimen holders are 10, 16 and 12 S.W.G. respectively. The dimensions of the various holders are given in Table 1 and a schematic diagram of the apparatus assembled for testing is shown in Figure 3.

3. Sharp knife and straight edge.

TEST SPECIMEN

Condition the sample in the standard or other atmosphere in which the testing is to be done in accordance with Appita Standard P 414m.

From the sample cut, for A-flute, at least five test specimens each 2.0 ± 1/64 in. wide (parallel to the direction of the flutes) and of such a length that each specimen has 6 corrugation crests on each side of the board (thus leaving 5 complete corrugations to be tested).

If a specimen has been cut in such a way that the whole or a portion of a crest in excess of the number required remains attached to a liner at the edge of the specimen, break the adhesive bond along that crest with a sharp instrument. For B-flute cut 5 specimens 1½ ± 1/64 in. wide and of such a length that each specimen has 14 corrugation crests on each side (thus leaving 13 complete corrugations to be tested). For C-flute cut 5 specimens 2 ± 1/64 in. wide and of such a length that each specimen has 7 complete corrugations on each side (thus leaving 6 complete corrugations to be tested).

Appita
476 Collins Street, Melbourne, Australia.

AUSTRALIAN STANDARD CA33—1962
(UDC 621.643.2)

CONCRETE PIPE LAYING DESIGN

Incorporated by Royal Charter

STANDARDS ASSOCIATION OF AUSTRALIA

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

ANNUAL REPORT 1962

AUSTRALIAN STANDARD K1, PART 18 — 1963
(UDC 669.1:543:546.18)

METHODS FOR THE ANALYSIS
OF IRON AND STEEL

Part 18
PHOSPHORUS IN IRON AND STEEL

PUBLISHED BY THE STANDARDS ASSOCIATION
OF AUSTRALIA, 157 GLOUCESTER STREET, SYDNEY

Incorporated by
Royal Charter

AUSTRALIAN STANDARD T24—1963

(UDC 615.473: 616.314)

DENTAL HYPODERMIC NEEDLES

The Standards Committee of the Australian Dental Association has adopted this standard for use in connection with its scheme for accreditation of certified dental materials, lists of which are published periodically in the dental journals throughout Australia. Enquiries regarding this scheme should be addressed direct to the Australian Dental Association. When used in connection with the scheme the standard is known as Australian Dental Standard No. T24 (ADS T24).

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

PUBLISHED BY THE STANDARDS ASSOCIATION OF AUSTRALIA, SCIENCE HOUSE, 157 GLOUCESTER STREET, SYDNEY

AUSTRALIAN STANDARD L16—1963

(UDC 677.01:542.3)

DETERMINATION OF CORRECTED INVOICE WEIGHT OF TEXTILE MATERIALS

Incorporated by Royal Charter

STANDARDS ASSOCIATION OF AUSTRALIA